

City of North Plains  
**OCCUPATIONAL  
SAFETY & HEALTH  
MANUAL**

**Prepared with assistance of**



citycounty insurance services  
[www.cisoregon.org](http://www.cisoregon.org)

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## **CHAPTER 1. SAFETY RESPONSIBILITIES**

### **A. Purpose**

Most public employees are covered under OR-OSHA Division 2, the General Industry Standard. This health and safety manual complies with the requirements of the OR-OSHA Division 2 standard.

There may be some employees who perform job tasks that are covered by additional safety and health requirements. For those employees, we will refer to the applicable regulations and comply with the additional code requirements in our health and safety program. These employees may include:

1. Employees or contractors who are engaged in construction work including maintenance work. These employees will need to comply with the OR-OSHA Division 3, Construction (1926) Standard.
2. Employees who perform electrical installations and utilization equipment installed or used within or on buildings, structures and other premises are required to comply with the Federal OSHA 29 CFR 1910.302 Electric Utilization Systems Standard, Division 2 Subpart S.

### **B. Applicable Legal Standards**

1. Federal: 29 CFR 1910.269
2. Federal: 29 CFR 1910.302
3. State: OR-OSHA Division 2, General Industry Standard
4. State: OR-OSHA Division 3, Construction (1926)

### **C. Management Commitment**

Just as employers have responsibilities for various job duties, City managers are also responsible for workplace safety and must be accountable for meeting these responsibilities.

Management and supervisory personnel are accountable for the safety of employees working under their supervision, and will be expected to conduct operations in a safe manner at all times. Management has the overall responsibility for the establishment, implementation, administration, and governance of the entity's entire safety program. Management staff responsibilities include:

1. Ensuring that safety and health regulations are observed.
2. Developing and implementing the safety program.
3. Assisting in preparation and revision of safety policies and implementation of the safety rules.

4. Monitoring and auditing each department or facility for safety and health hazards.
5. Establishing or approving procedures for hazardous operations.
6. Monitoring and auditing the operation for safety and health hazards.
7. Overseeing the investigation of all accidents, reporting near-misses or hazardous conditions, and assuring that appropriate steps for corrective action are implemented in a timely manner. In the event of an accident, conducting a complete and thorough investigation before leaving work for the day.
8. Reviewing and approving the safety aspects of any facility layout, design, and alteration.
9. Maintaining weekly contact with any worker who is away from work due a work related injury or illness, and documenting the contact in a written record.
10. Completing the safety orientation of new employee and conducting mandatory safety meetings and training.
11. Recommending safety procedures and practices.
12. Maintaining the OR-OSHA injury and illness logs and complying with state and federal injury reporting requirements.
13. Retaining exposure and medical monitoring records.
14. Managing our workers' compensation program.
15. Assisting supervisors with safety performance issues if requested, or in the event of a specific trend of injury types or sources.
16. Administering all other insurance including property, liability, workers' compensation, and employee health insurance.
17. Any supervisors or persons in charge of work are the agents of the employer in the discharge of their authorized duties, and are responsible for:
  - a) The safe performance of the work under their supervision.
  - b) The safe conduct of the crew under their supervision.
  - c) The safety of all workers under their supervision.

#### **D. Employees' Responsibilities**

Employees' role in safety is critical. Employees are responsible to follow proper safety and health practices. It is important that everyone report unsafe conditions to their supervisor and the Safety Committee so that the condition or facility can be corrected. Safe work practices are for all our employees' benefit.

Employees are responsible for:

1. Carrying out each task using every required and reasonable precaution to protect themselves and co-workers from injury.
2. Being alert to and reporting any unsafe conditions or practices observed to the immediate supervisor.
3. Immediately reporting all injuries to their supervisors.
4. Being familiar with and abiding by the safety policies.

### **E. Safety Committee Responsibilities**

The Safety Committee's responsibility is to advise management on safety related issues in the work place and to provide leadership in protecting the safety and health of all employees. The Safety Committee plays an essential role in the overall safety effort and serves as the primary means of communicating and exchanging information on safety issues. Safety Committee responsibilities include:

1. Recommending programs for the safety and health of employees.
2. Monitoring the programs and work procedures designed for employee safety and health.
3. Considering individual employee concerns and suggestions regarding safety and health, communicating with the management team regarding concerns and suggestions, and reporting back to the individual employee in a timely manner.
4. Reviewing employee safety input forms and recommending appropriate corrective action in writing.
5. Promoting programs to improve the safety, health, training, and awareness of all employees.
6. Participating in the investigation of safety hazards as needed.
7. Providing a means for employees to work together on identifying hazards and developing acceptable solutions to safety problems.

The Safety Committee meets at least monthly and will provide reports to the management team(s).

Though the Safety Committee's role is advisory, all reasonable means will be taken by management to address the concerns of the committee. The Safety Committee Charter is defined in detail in Part 2, Chapter 1.

### **F. Safety Committee Chair Responsibilities**

1. Presenting to the management team safety policies to meet OR-OSHA compliance.
2. Assisting the Safety Committee with the implementation of all safety policies and procedures.

3. Evaluating safety performance issues upon request or if specific injury trends are identified.
4. Working with the Safety Committee to develop or recommend safety-training programs.
5. Developing and or maintaining educational and instructional materials.

### **G. Safety Communication Network**

As reflected in the management commitment statement, maintaining a safe place of employment requires a cooperative effort on the part of each employee. Essential for such cooperation is a communication system capable of conveying safety information. The following outlines our communication network:

1. Written communications (either on paper and North Plains website), to be available to the employees in each department, regarding major and/or complex issues.
2. Safety Committee meetings should be scheduled at least every month. These meetings will have a standard agenda that shall be revised as appropriate and participants will report on various safety/health related issues. The agenda for Safety Committee meetings should include (but are not limited to):
  - a) Review of applicable regulatory issues.
  - b) Status of current safety issues.
  - c) Review of accidents that have occurred and corrective actions taken. This includes a discussion of any trends or near-miss reports.
  - d) Discussion of any major process and operational changes that may affect safety or environmental programs or result in additional planning.
  - e) Each department representative or the supervisor will report on the status of on-going safety training and any assistance needed.
3. Getting safety input from individual employees can be accomplished through a variety of avenues including:
  - a) Addressing the issue with the immediate supervisor.
  - b) Reviewing with any level of management, via our open-door policy.
  - c) Submitting a written safety recommendation.
  - d) Reviewing with a safety committee representative.

### **H. DISCIPLINARY ACTIONS FOR UNSAFE PRACTICES**

All employees will follow our basic safety rules. If employees knowingly violate North Plains' safety procedures and rules, which includes behaviors that jeopardize their own and others'

safety, disciplinary or corrective action may be taken in accordance with the City of North Plains policies. A sample form is included in the forms section.

## **CHAPTER 2. SELF-INSURED LOSS PREVENTION PROGRAM**

### **A. Purpose**

OR-OSHA requires specific Loss Prevention Activities to be performed by group self-insured employers. As a member of CIS workers' compensation, the City of North Plains is considered to be a self-insured employer and must comply with the specific OR-OSHA self-insured employer rules. This includes a written plan and specific activities.

### **B. Applicable Legal Standards**

1. State: OAR 437-001-1055 & 1060

### **C. Written Occupational Health and Safety Loss Prevention Program**

The program's function is to address the loss prevention effort and inform management and employees of the availability and process for requesting loss prevention services.

The City of North Plains' overall Safety Manual and in particular Part 1 Chapter 1 Sections A-D meet this requirement.

### **D. Required Loss Prevention Elements**

**The following elements are required by OR-OSHA for each group and self-insured employer. The overall operation of our safety program and recordkeeping will meet these elements.**

1. **Management commitment to health and safety.**

Method of compliance: The statement of commitment is primarily our Safety Manual but commitment is also shown by our responsiveness to the Safety Committee's concerns and recommendations.

Recordkeeping: The Safety Manual and written responses to Safety Committee concerns and recommendations are maintained by the administration.

2. **Accountability system for employer and employees.**

Method of compliance: Each employee's job performance includes review of safety behavior and activities.

Recordkeeping: The City Manager retains employee performance records and any record of discipline for safety issues.

3. **Training practices and follow-up.**

Method of compliance: Training is the responsibility of the department Head's. We have developed a schedule for training and have identified the specific training needs.

Recordkeeping: The record of training is maintained by the City Manager or his or her designee.

**4. A system for hazard assessment and control.**

Method of compliance: The Safety Committee's quarterly inspections and supervisor's routine review of their work activities at the various locations will serve to ensure that we have appropriate auditing. OR-OSHA expects that the quarterly inspection assess all the employer's locations/operations. In addition our CIS Risk Management Consultants conduct periodic inspections at our facilities.

Recordkeeping: The primary records of the inspection and audit services will be maintained by the City Manager or his or her designee. The Safety Committee will make a record of each quarterly inspection; this will be placed in the Safety Committee Inspection file. Any written inspection report done by a supervisor (i.e. lock out tag out annual inspection) will be kept in the department's safety file. A sample inspection form is included in the forms section of this manual.

**5. A system for investigating all recordable occupational injuries and illnesses that includes corrective action and written findings.**

Method of compliance: Management and/or the supervisors are responsible for completing accident investigations. Specific method and training materials are provided in Part 2 of the Safety Manual. The Safety Committee also reviews and comments on the accident investigations and they may participate in some of the investigations.

Recordkeeping: The primary accident investigation records maintained by administration.

**6. A system for evaluating, obtaining and maintaining personal protective equipment (PPE).**

Method of compliance: Each supervisor has an overall responsibility for ensuring the selection and purchase of appropriate PPE and that the PPE are properly used and maintained. The Safety Committee and others conducting daily or quarterly inspections will review the PPE program's adequacy. Section 7 provides PPE policy, selection, maintenance, and training information.

Recordkeeping: The primary records for PPE inspection are maintained by the department supervisors.

**7. On-site routine industrial hygiene and safety evaluations to detect physical and chemical hazards of the workplace, and the implementation of engineering or administrative controls.**

Method of compliance: Basic occupational safety and health inspections are done by the Safety Committee and supervisors. More technical assistance is provided by our CIS Risk Management Consultants, OR-OSHA consultants and private safety and industrial hygiene consultants.

Recordkeeping: The primary records of the inspection and audit services will be maintained by the managers, supervisors and Safety Committee.

**8. Evaluation of workplace design, layout and operation, and assistance with job site modifications utilizing an ergonomic approach.**

Method of compliance: Basic ergonomic inspections are done by the Safety Committee. More technical assistance is provided by our CIS Risk Management Consultants, OR-OSHA consultants and private consultants.

Recordkeeping: The primary records of the ergonomic survey and findings will be maintained by the supervisor or manager of the group or department receiving the evaluation.

**9. Employee involvement in health and safety efforts.**

Method of compliance: This is a primary concern for management and the Safety Committee. Routine meetings or staff meetings are the primary focus for employee involvement. Safety is a daily activity and our employees are expected to perform their work as instructed for their own and coworker safety.

Recordkeeping: The primary records of employee involvement are found in the supervisor's safety inspection records, minutes of staff meetings or in Safety Committee minutes.

**10. An annual evaluation of the employer's loss prevention activities based on the location's current needs.**

Method of compliance: An annual report will be prepared in January or June of each year for the previous year's activities. The report will be prepared by the City Manager, the Safety Committee, Department Heads.

Recordkeeping: The annual reports will be maintained by the City Manager and available to the Safety Committee and OR-OSHA upon request.

## **CHAPTER 3. RECORDKEEPING**

### **A. Purpose**

The OR-OSHA Safety Program requires that many different types of records be retained. This safety manual has been written so that the City of North Plains and/or department initiating the records are required to keep a copy and forward a copy to the City Manager as the primary "keeper of records".

All work-related fatalities, injuries, and illnesses will be immediately recorded and reported. Form 801 is required, and must be completed within five calendar days of the time the fatality, injury, or illness occurred. The supporting information shall be documented on these forms:

1. Incident/Accident Report (for all incidents, injuries, and illnesses)
2. OSHA 300 Log (summary of work related injury/illness)

### **B. Applicable Legal Standards**

Applicable Legal Standards for recordkeeping are explained in detail below.

### **C. Recording Work-related Injuries and Illnesses**

Injuries or illnesses are work-related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing injury or illness. These incidents can result in one or more of the following:

1. Death
2. Days away from work
3. Transfer to another job
4. Medical treatment beyond first aid
5. Loss of consciousness
6. Diagnosis of a significant injury or illness

*Note: Hearing loss is recorded on the OSHA 300 Log when an annual audiogram reveals a Standard Threshold Shift (STS) in either or both ears and the hearing level in the same ear is 25 decibels (dBA) above audiometric zero.*

*Note: Needlestick and sharps injuries that are diagnosed later as an infectious bloodborne disease must be updated on the 300 Log to reflect the new status or classification.*

At the end of the year, management will review the Log to verify its accuracy, summarize the 300 Log information on the 300 A summary form, and certify the summary. This information will then be posted for three months, from February 1<sup>st</sup> to April 30<sup>th</sup>. These records will be kept for five years following the calendar year covered by them.

## D. Table of Required Records

The following chart shows what records must be maintained under the General Industry Standards. The Construction Standards have additional records that include these listed.

Record/Plan	Overall Plan	Written Type of Record		Retention Time
		Training	Inspection	
1. Injury Records 437-001-700 a. Form 300 b. Form 801 c. Form 300A d. Accident Investigation 437-001-0760(3)  *In addition, health care employers as defined in ORS 654.001 to 654.295 must record assaults against employees on the Health Care Assault Log. See OAR 437-001-0706.	x (complete w/in 7 days) x (complete w/in 7 days) x (post February – April) x each time loss accident		x	5 years 5 years 5 years 5 years
2. Employee Exposure 1910.20(d)		x		30 yrs + emp
3. Bloodborne Pathogens 1910.1030(c)(1)	x	x	x (incident investigation)	30 yrs + emp
4. Medical Plan & Records 1910.20(d) & 1910.151 & 437-02-161(4)	x			30 yrs + emp
5. Emergency Plan 1910.38(a)(2)	x			Not specified
6. Fall Protection 1926.502(k)	x	x	x	Not specified
7. Fire Plan 1910.38(b)(2)	x			Not specified
8. Specific Chemical Subs. (minimum requirements)* a. Exposure Record b. Medical Exams c. Resp. Fit Testing (in some cases) <i>Example: Formaldehyde 1910.1048(m)(5)</i>			x x x	30 yrs. 30 yrs + emp most current
9. Asbestos Plan 1910.1001 1926.1101(k)	x	x	x	Current + 30 yrs
10. Hazard Communication 1910.1200(e) a. Written Plan b. MSDS or list c. Employee Training	x	x	x	Need current 30 yrs + emp not specified
11. Lockout/Tagout a. Written Procedures b. Periodic Audit c. Employee Training 1910.147(c)(4)		x	x (annually)	Not specified Not specified Not specified

Record/Plan	Overall Plan	Written Type of Record		Retention Time
		Training	Inspection	
12. Hazardous Materials a. Written Plan b. Employee Training 1910.120(p)(8)(ii)	x	x(annually)		Current plan Current plan
13. Laboratories 1910.1450(e)	x	x	x annual review	30 yrs + emp
14. Noise & Hearing Cons. a. Employee Exposure b. Audiogram c. Calibration Data 1910.95(c)			x x x	2 yrs 5 yrs + emp. Current levels
15. Personal Protective Equipment 1910.132(d)	x	x	x	Not specified
16. Respirators a. Written Program b. Inspection Maintenance c. Emergency Use Resp. 1910.134(b)(1)	x		Monthly	Not specified Not specified
17. Safety Committees 437-001-0765	x	x	x (minutes)	3 yrs
18. Crane Inspections a. Daily b. Monthly c. Annually 1910.179 -.182	**		** x x	Not specified Not specified
19. Fire Protection a. Fire Extinguishers  b. Standpipe & Hose c. Fire Detection 1910.157(e), 1910.158(e) 1910.159(c), 1910.164(c)			x (annual)  x (annual) x (periodic)	1 yr or replaced by a new record Not specified Not specified
20. Mechanical Power Press 1910.217(h)(10) and (11)			x	Not specified
21. Safety Inspections/Audits 437-001-0760			x (quarterly by Saf. Comm.)	3 yrs
22. Confined Space Entry 1910.146(d) & (e)	x	x	x entry permit	1 yr - permit
23. Process Safety 1910.119	x (5 yr. updates)	x	x audits, incident records	Varies (see rules)
24. Welding 1910.252(xiii) & (xiv)			x (periodic)	Not specified
25. Lead Plan Gen. Industry 1910.1025(e)(3) and 1926.62 (maintenance or removal of lead painted or containing building materials)	x	x	x	Current + 30 yrs
26. Hexavalent Chrome Plan Gen. Industry 1910.1026	x	x	x	Current + 30 yrs
27. General Instruction Supervision & Training 437-001-0760(1)	x	x		Not specified

\* Chemical Substances Specific Standards include: acrylonitrile, asbestos, anhydrous ammonia, arsenic, benzene, carcinogens, ethylene oxide, formaldehyde, lead, vinyl chloride, DBCP, cadmium.

## **CHAPTER 4. SAFETY AND HEALTH TRAINING PROGRAM**

### **A. Purpose**

A major component of this safety program is employee training. Training efforts will be directed at developing each employee's knowledge, skills, and understanding to allow them to work safely. Training will be provided through various means; however, the primary instruction will be given by their direct supervisor.

### **B. Applicable Legal Standards**

Applicable Legal Standards for OR-OSHA training are explained in detail below.

### **C. New Employee Orientation**

All new employees will participate in a "New Employee Orientation Program." Such training is conducted in a two-phase approach:

1. The new worker will receive general information on City of North Plains culture policies and benefits by the City Manager or his or her designee.
2. Department related rules and information will be given by the supervisor of the department. Training will include a general understanding of all related safety programs and policies. Facility and job specific training will be given by the employee's immediate supervisor or lead worker before the employee will be allowed to begin actual work, and the training will be documented in the employee training file.

### **D. Training Requirement Matrix**

The safety manual and training matrix listed below identifies the possible training requirements for employees.

1. Some subjects are mandatory in nature, with OR-OSHA requiring their annual review:
  - a) Emergency Response Plans (Chapter 2)
  - b) Fire Extinguishers (Chapter 2, Part H)
  - c) Hazard Communication (Chapter 5)
  - d) Hazardous Energy Control - Lockout/Tagout (Chapter 6)
  - e) Hearing Conservation - Effects of Noise Exposure (Chapter 7)
  - f) Personal Protective Equipment and Respiratory Protection (Chapters 8-9)
  - g) Asbestos Awareness (Chapter 11)
2. Other subject areas are deemed mandatory only for selected operations, or when employees change, such as:

- a) Confined Space Entry
- b) Hazardous Energy Control - Lockout/Tagout
- c) Bloodborne Pathogen Training
- d) Hazardous Materials - Waste Handling
- e) Welding Safety
- f) Safety Committee Training
- g) Fork Lift Operations

The chart below is an employee training checklist to be used to track training needs and training dates. Forms for new employee orientation are included in the forms section.

*It should be noted that the listing does not include all references for competent or qualified employees as defined by state and federal statutes. Further there are additional health and occupational health rules such as asbestos which require trained employees but were not listed separately.*

## OR-OSHA BASIC GENERAL INDUSTRY TRAINING REQUIREMENTS

Program	Training Frequency			Written Program
	Initial	Annual	Retraining Required	
General Duty to Train	X		If program/hazards change	no
Accident Signs	X		If signs change	no
Crane Operator	X		Construction – 3 yrs General if changes or problems	yes
Electrical	X		Job duties change	no
Emergency Medical Plan	X		If plan changes – update	yes
Emergency/Fire Prevention	X		If plan changes – update	yes
Fall Protection (construction related)	X		If plan/equipment change or inadequacies found	yes
Fire Extinguishing System	X	X		no
First Aid/CPR	X		1-3 years	no
Forklift Operator	X		Every 3 yrs classroom & practical	yes
Lockout	X		If plan changes or problems noted	yes
Mech. Power Press	X		Initial must remain competent	no
Power Platforms	X		Initial must remain competent	no
Pressure Vessels	Competent person required			no
Safety Committee	X		New members annual	yes
Welding	X		Initial must remain competent	no
<b>Occupational Health</b>				
Access to Exposure & Medical Records	X	X		no
Asbestos (awareness) Note: Extensive training for actual abatement or renovation)	X	X		yes plan & notification
Bloodborne Pathogens	X	X	When plan changes	yes
Confined Space	X		If plan changes/annual for rescue staff	yes
Chemicals *	X		If over action level	yes for some
Hazard Communication	X		If new chemicals are used	yes
Haz. Mat'ls Response 5 levels 4 to 40 hours	X	X	Annual refresher is 8 hours	Yes
Hexavalent Chromium (employees who have the potential of being exposed above the action level)	X		Posting	yes
Laboratories	X		If plan changes/chemicals	yes
Lead (awareness) (note: extensive training for actual abatement and renovation)	X	X	Posting	yes
Noise	X	X		no
Personal Protective Equipment	X		If there are changes or problems noted	yes
Process Safety	X	X	Training certificate required	yes
Respirators	X	X	Or when changes or problems noted	yes

\* Specific chemical substance standards include: acrylonitrile, asbestos, anhydrous ammonia, arsenic, benzene, cadmium, carcinogens, ethylene oxide, formaldehyde, lead, methylene chloride, vinyl chloride, DBCP, Pesticides.

## CHAPTER 5. ACCIDENT INVESTIGATION PROCEDURES

### A. Purpose

The City of North Plains' foremost goal is to prevent and eliminate work place accidents/illnesses. However, should they occur, management will thoroughly investigate to determine the cause(s) and appropriate corrective action to be taken to prevent future recurrence.

The City of North Plains' focus is not simply on unsafe acts or conditions that may have led to the accident, but also on why the unsafe acts or conditions were present. From this perspective we are better able to identify any changes that are necessary.

### B. Applicable Legal Standards

1. State: OAR 437-001-0760 Investigations of Injuries:

“Each employer shall investigate or cause to be investigated every lost time injury that workers suffer in connection with their employment, to determine the means that should be taken to prevent recurrence. The employer shall promptly install any safeguard or take any corrective measure indicated or found advisable.”

2. State: OAR 437-001-0765(6) (g) Safety Committee/Accident Investigation:

“The safety Committee shall establish procedures for investigating all safety-related incidents including injury, illness, and deaths. This rule shall not be construed to require the committee to conduct the investigations.”

3. State: OAR 437-001-0052 Reporting an Occupational Fatality, Catastrophe, or Accident:

We are responsible to notify OR-OSHA within 8 hours of a workplace fatality or catastrophe, and within 24 hours of an injury resulting in overnight or longer hospital admission.

### C. Definitions

**Accident** - An unplanned event that results in personal injury or property damage.

**Catastrophe** - An accident in which two or more employees are fatally injured or five or more employees are admitted to a hospital or equivalent medical facility.

**First Aid** - Any one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and so forth, which do not ordinarily require medical care. Such treatment and observation are considered first aid even though provided by a physician or registered professional person.

**Lost Workday Case** - An injury which involves days away from work or days of restricted work activity, or both.

**Medical Treatment** - Includes treatment of injuries administered by physicians, registered professional persons, or lay persons (i.e., non medical personnel). Medical treatment does not

include first aid treatment (see above) even though provided by a physician or registered professional personnel.

**Near-Miss** - Any unplanned event which could potentially have resulted in personal injury or property damage but based upon “good fortune” did not.

**Occupational Illness** - Any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. It includes acute and chronic illnesses or diseases which may be caused by inhalation, absorption, ingestion, or direct contact.

**Recordable Case** - All work-related deaths, and illnesses, and those work-related injuries which result in: loss of consciousness, restriction of work motion, transfer to another job, or require medical treatment beyond first aid.

#### **D. General Responsibilities**

1. **Management**: It is the direct responsibility of department heads or managers to ensure that all reported injuries, illnesses, near-misses, or reports of property damage, are promptly investigated as to cause and that any necessary corrective measures are implemented so as to reduce the likelihood of recurrence.
2. **Immediate Supervisor**: It is the responsibility of the supervisor or group leader to promptly perform the initial accident investigation of all reported injuries, illnesses, near misses, or reports of property damage, and arrive at recommendations to reduce recurrence.
3. **Management Team**: The City Manager and Department Heads shall be involved in the investigation of all seriously disabling claims, fatalities, and catastrophes.
4. **Safety Committee**: The Safety Committee will review all written accident investigation reports, and associated recommendations, and provide additional insight as to methods which might assist in reducing the incidence of recurrence.
5. **Employee**: The employees are responsible for immediately reporting to their supervisor any injury, illness, near-miss, or any accident involving property damage, sustained in the scope of their employment.

#### **E. Accident Investigation Procedure**

1. **Accident Reporting Personal Injury** - If an employee is injured, suffers an occupational illness, or near-miss, the following reporting procedures shall be carried out:
  - a) The incident and/or condition will be immediately reported to the worker’s supervisor who will complete the Accident/Injury Report, regardless of the severity of the injury.
  - b) All injuries regardless of how insignificant they initially may appear must be immediately reported to the supervisor. An Accident/Injury Report must be completed by the end of the shift.

- I. The supervisor must review the Accident/Injury Report Form submitted by the employee and sign where indicated. The supervisor must assure immediate transmittal of the report to the City Manager, and the Safety Committee.
  - II. The supervisor and employee must complete the Accident/Injury Report. If the injury is of a minor nature and only needs a brief doctor's office visit, PRIOR to obtaining medical attention, the report must be on file in the City Manager's office and the employee is to notify the doctor's office that the City of North Plains should be billed for the office visit.
2. Any time that the work-related condition should necessitate the services of a medical provider, the employee is further required to complete a Workers' Compensation Claim Form 801. The 801 must be filed with the City Manager within five days of the accident.
- a) The City Manager or designee is required to report all work place fatalities and catastrophes to OR-OSHA within eight hours of knowledge at OR-OSHA's central office (503-378-3272).
    - I. OR-OSHA requires that employers and their representatives not disturb the scene of a fatality or catastrophe other than to conduct the rescue of an injured person until authorized by the OR-OSHA Manager (or designee), or directed by a recognized law enforcement agency to do so.
    - II. Further, all employee injuries resulting in admission to a hospital also require notice to OR-OSHA within 24 hours of knowledge. Such notice will again be accomplished by the City Manager or his or her designee.

Note: The purpose of such reporting is to provide OR-OSHA the opportunity to conduct an independent investigation, should they so choose. This form of reporting applies only to injuries requiring immediate hospitalization and not conditions that result in hospitalization weeks or months later.

3. **Accident Reporting: Vehicular Accidents** - In the event that a vehicle is involved in a traffic accident, the driver shall immediately call 9-1-1 and notify his or her supervisor. No vehicle shall be moved from the scene until law enforcement arrives or photographs are taken, unless a greater hazard would be created by failure to remove the vehicle(s) from the scene. The following procedures apply:
- a) All drivers should notify the Local Law Enforcement Agency (9-1-1) of any of the following accidents:
    - I. Collision with any object or person involving an City- owned or leased vehicle, or other vehicles being used on official business.
    - II. Any event where damage results to a vehicle being operated by an employee while on business, whether being driven or parked.
    - III. Any involvement in an accident where damage claims may be made against the City, even though your vehicle had no contact with other objects or vehicle.

IV. Damage or loss to one of the City-owned or leased vehicle or contents due to a fire or theft.

- b) In all instances where the damage is determined to be in excess of \$1,000 or there is an injury accident, the driver shall complete a "State of Oregon Vehicle Accident Report".

#### 4. Investigation

- a) Upon notice of an accident, injury, illness, near-miss, or non-work related physical complain, the supervisor will ensure that the accident investigation procedure is implemented in a timely fashion. (Use the *Accident/Injury Report Form*.)
- b) The supervisor shall first establish the nature of the employee's report since any corresponding investigation will in part be controlled by such determination. The nature of the problem being reported could include:
- I. In those instances in which the worker complains of either non-work related, or of unknown origin, the supervisor will complete those appropriate portions of the investigation report form.
  - II. The supervisor will accurately record the employee's explanation as to any off-the-job exposure or event which may have contributed to the problem.

This report form will be completed prior to the conclusion of the workday and provided to the City Manager for review and processing.

- c) In those instances in which the employee is alleging a work relationship, the supervisor will complete and submit the entire investigation form, in conjunction with their recommendations to the Safety Committee.
- I. In those instances in which the reported incident results in either first aid, or medical only treatment, the City Manager or his or her designee will ascertain if there is sufficient information present in the supervisor's report to determine the source of the problem. If appropriate, recommendations for any necessary corrective action will be identified and reported back to the supervisor.
    1. After the report is adequately completed, the supervisor's report will be attached to the *Accident/Injury Report Form* and submitted to the Safety Committee.
  - II. The supervisor will further ensure that the necessary corrective action is taken through the completion of a work order, purchase order, etc., where appropriate.
  - III. Alternatively, the supervisor may, at his or her discretion, request a follow-up investigation due to shortcomings associated with the original effort, complexity of the issues, recurrent nature of the problem, etc. Such a follow up investigation shall be completed by the supervisor or Safety Committee.

- IV. In those instances in which the Safety Committee conducts an investigation, the results will be submitted to the supervisor in a written narrative format, inclusive of all factual information gathered and specific recommendations for remedy in a timely fashion.
- d) All fatalities, catastrophes, cases of serious disabling injury, multiple injury victims, or any instance in which the circumstances surrounding the event are suggestive of potential City involvement, the supervisor will provide timely notice to the City Manager and Safety Committee who will become involved if appropriate, in the investigation process.
- e) In any instance where the supervisor deems appropriate, he or she will encourage the involvement by at least one member of the Safety Committee in the accident investigation process.

#### **F. Accident Investigation Reporting Form**

The following process will be followed when reporting injury accidents and occupational diseases.

1. The supervisor of the injured employee will fill out the *Accident/Injury Report Form* and the *Accident Investigation Form* on the back. **Please report all occupational accidents, illnesses and near misses. (THE CITY MANAGER MUST BE NOTIFIED IMMEDIATELY IF THE INJURY/ILLNESS IS SERIOUS OR A DEATH OCCURS).**
2. After sign the *Accident/Injury Report Form* to verify its completion, the supervisor will send the form to the City Manager.
3. The supervisor must turn in the completed *Accident/Injury Report Form* to the City Manager. The supervisor will check to make sure all forms are complete and do further investigation if needed.

**(If a SERIOUS INJURY, ILLNESS or FATALITY occurs the Department Head must do a complete investigation in cooperation with the City Manager and the CIS Risk Management representative. The Department manager should attach a "Scene Diagram Sheet", Photographs, investigation report and witness statements to the *Accident/Injury Report Form*.) Notify OSHA with 24 hours of knowledge of a catastrophic or fatal accident.**

#### **G. Posting Requirements**

All required posting will be on the employee bulletin boards at each of the City offices.

1. Injury and Illness Summary Report on the OSHA 300A are posted from February 1<sup>st</sup> to April 30<sup>th</sup>.
2. Any citation or variance will be posted for at least 60 days or until they become a final order or are corrected.
3. The Oregon Safe Employment Poster shall be continuously posted.

## CHAPTER 1. SAFETY COMMITTEE AND SAFETY MEETINGS

### A. Purpose

The foundation for the implementation of this Safety Committee program is well stated in OAR 437-001-0765, *“The purpose of Safety Committees and safety meetings is to bring workers and management together in a non-adversarial, cooperative effort to promote safety and health. Safety Committees and safety meetings will assist you in making continuous improvement to your safety and health programs.”*

It is our policy for the Safety Committee and Safety Meetings to communicate and evaluate safety and health issues to assist with protecting the safety and health of all of our employees. Injuries and property loss from accidents are needless, costly, and preventable. Therefore we must adhere to fundamental safety concepts that will help prevent injury and loss due to recognized hazards.

### B. Applicable Legal Standard

1. State: OAR 437-001-0765 Safety Committees and Safety Meetings

### C. Definitions

**Management** – Department Heads and City Manager

**Employee Representative** - An individual selected by and from employees, who serves as a spokesperson.

**Safety Committee** - Consists of management and staff representatives that have an interest in the general promotion of safety and health.

**Safety Meetings** - Include all available employees, include at least one employer representative authorized to ensure correction of safety and health issues, and be held on company time and attendees paid at their regular rate of pay.

### D. General Responsibilities

1. **Overall Management**: The overall management is responsible for preventing accidents and injuries. Our management provides direction and full support of all safety procedures, job training and hazard elimination practices.
2. **Supervisors**: Supervisors are directly responsible for job training of their workers. Job training will include proper procedures, work practices and safe methods to carry out jobs. Supervisors must enforce our safety rules and take immediate corrective action to eliminate hazardous conditions.
3. **Safety Committee**: The Safety Committee's responsibility is to advise management on safety and health issues, safe work practices, and to provide leadership in protecting the safety and health of all employees. The Safety Committee plays an important role as the prime forum for communication and exchange of information on all safety issues.

- a) The committee is charged with the responsibility to define problems and obstacles for loss prevention; identify hazards and suggest corrective actions; help identify employee safety training needs, and to develop accident investigation procedures.
- b) The Safety Committee will be kept fully informed on health and safety issues throughout our organization in order to constantly review the effectiveness of the safety and health program.
- c) All personnel are expected to cooperate in all aspects regarding safety and health issues. Some of the fundamental safety concepts are:
  - I. Accidents must be reported immediately to the supervisor, on the same day they occur.
  - II. Required personal protective equipment (PPE's) will be worn by all employees. There are no exceptions.
  - III. Machines or equipment without adequate guarding, or in questionable condition, will not be used. Report hazardous equipment to the supervisor or Department Head.
  - IV. Hazardous conditions, or other safety concerns, are to be reported to the supervisor immediately.

#### **E. The Safety Committee's Goals and Duties**

The following obligations have been assigned to the Safety Committees in compliance with Oregon Administrative Rule 437-001-0765:

1. Work with management to establish, amend or adopt accident investigation procedures that will identify and correct hazards.
2. Have a system that allows employees an opportunity to report hazards and safety and health related suggestions.
3. Establish procedures for reviewing inspection reports and for making recommendations to management.
4. Evaluate all accident and incident investigations and make recommendations for ways to prevent similar events from occurring.
5. Make Safety Committee meeting minutes available for all employees to review.
6. Evaluate management's accountability system for safety and health, and recommend improvements. Examples include use of incentives, discipline, and evaluating success in controlling safety and health hazards.

## **F. Safety Committee Responsibility & Authority**

1. The Safety Committee does not make policy, but it is responsible for recommendations to Management on employee safety and health issues. The supervisor will consider each recommendation and notify the Safety Committee what action will be taken, why, and when by the next scheduled safety meeting.
2. The committee, or its members, will not interfere with the work of staff and, they will not disturb the affairs of any department, or challenge supervisor authority.

## **G. Committee Membership**

1. The committee shall be composed of an equal number of employer-selected members and employee-elected or volunteer members. If both parties agree, the committee may have more employee-elected or volunteer members.
2. Safety Committee members shall be volunteers, or be elected by their peers, and represent the various departments in our organization.
3. Employee members must represent major activities of our business.
4. Management representatives should have authority to make decisions regarding unsafe acts and hazards identified by committee members.
5. Safety Committee participation will be used to provide positive reinforcement to those who take the extra effort to make our facilities a safe environment, thus making committee participation a valued activity.
6. Employees shall be encouraged to submit safety recommendations, concerns, etc. to their Safety Committee representative.

## **H. Safety Committee Organization and Operational Procedures**

### **Organization**

A centralized Safety Committee must make certain that the committee membership represents the safety and health concerns of all locations.

### **Operations**

1. The Safety Committee will meet monthly on during regularly scheduled shifts.
2. The committee will have a chairperson elected by the committee members, and this person will serve as the chairperson for one year.
3. Employee representatives attending Safety Committee meetings required by OAR 437-001-0765 or participating in Safety Committee training or instruction shall be compensated at their regular rate of pay.
4. Employee representatives will serve a continuous term of at least one (1) year.

5. Safety Committee members will receive training in Safety Committee operations, the principles of accident/incident investigations for use in evaluating those events, and hazard identification.
6. Safety Committee Member duties:
  - a) Be active in completing assignments given by the chairperson, as well as acting as an area representative in matters pertaining to health and safety.
  - b) Observe how the safety and health policies are enforced in the work environment.
  - c) Advise supervisors about situations which could lead to injury or illness.
  - d) Recommend safeguards and warn of potential hazards.
  - e) Be open to education and training.
  - f) Conduct quarterly workplace inspections.

### **Meeting Conduct**

The meeting shall be conducted following a prescribed format:

1. The committee shall hold regular meetings at least once a month, except in those months in which the mandatory quarterly safety inspections are made. Quarterly inspections can be substituted for the monthly meeting in the month the inspection is made.
2. Committee Written Records:
  - a) Minutes shall be made of each meeting which the supervisor shall maintain for a period of three years for inspection by OR-OSHA. The records will be kept in the City Manager's Office files. The minutes for each meeting should include the following:
    - I. A record of who attended the meeting.
    - II. Meeting date.
    - III. All safety and health issues discussed, including tools, equipment, work environment, and work practice hazards.
    - IV. Recommendations for corrective action and a reasonable date by which management agrees to respond.
    - V. Person responsible for follow up on any recommended corrective actions.
    - VI. All reports, evaluations, and recommendations made by the committee.

- VII. Copies of the meeting minutes shall be given to all committee members, the Supervisor, and additionally made available to all employees through posting on the appropriate bulletin boards.

### **Conducting Inspections**

1. The committee will have established procedures for work place inspections by a Safety Committee team to assist in locating and identifying safety and health hazards.
2. The inspection team shall include management as well as an employee representative.
3. Any safety deficiencies identified will be made known to the supervisor so that corrective action may be expedited.
4. Inspections will be completed on a quarterly basis for all primary fixed locations.
5. The committee will additionally implement procedures for the review of all safety inspections and means of making appropriate recommendations to the supervisor or managers as to how to eliminate hazards and unsafe work practices in the work place.
6. A written record of all such inspections, related recommendations and the Management's response, shall be maintained by the committee as a part of its normal recording procedures.

### **Accident Investigations**

1. The Safety Committee shall work with management to establish procedures for the investigation and review of all safety-related incidents including injury, illness and deaths. (See Chapter 2 of the Safety Manual)
2. Accident investigations done by management will be reviewed as part of the monthly safety meetings. The committee will evaluate all injuries/illnesses and "near-miss" accidents reported to the supervisor and/or committee and any related investigations completed.
3. If upon review, the committee feels additional information is required, they may send representatives to the accident site to ensure that the actual cause of the event has been identified.
4. The committee upon such review will make recommendations to the supervisor as appropriate for purpose of preventing recurrence of such events.
5. At least annually the committee will review and provide comment as it relates to:
  - a) The injury and illness statistical analysis.
  - b) Our overall safety program.
  - c) Management's accountability system for safety and health.

### **Safety Committee Training**

1. Members of the Safety Committee shall receive required periodic training as relates to the following areas:
  - a) The function and duties of the Safety Committee.
  - b) Hazard identification in the work place.
  - c) The principles regarding effective accident investigation.
2. A written record of the training needs to be maintained.
3. The Department Heads will ensure that the training is provided.

## **CHAPTER 2. EMERGENCY ACTION, FIRE PREVENTION PLAN, AND FIRST AID**

### **A. Policy**

The City of North Plains has adopted this Emergency Action and Fire Prevention Plan to assist in preventing an emergency from occurring and if one should occur, to minimize the impact on our staff, our property and equipment and the public using our facilities. This plan is supported by maps that are posted in each of our buildings. Our main responder in all emergencies is the Washington County Fire Department.

### **B. Applicable Legal Standards**

The following OR-OSHA standards apply to emergency and fire prevention plans and actions:

1. State: OAR 437-02-1910.38 Emergency Action & Fire Prevention Plans
2. State: OAR 437-02-1910.35-.37 Means of Egress - Exiting
3. State: OAR 437-02-1910.0157 Fire Protection
4. State: OAR 437-02-1910.0120 Hazardous Materials Emergency Response
5. State: OAR 437-02-0161 First Aid & Emergency Medical Response

### **C. Definitions**

The following are OR-OSHA definitions that are key to understanding the legal requirements for this plan.

**Emergency Action Plan** - A plan for a workplace describing what procedures the employer and employees must take to ensure employee safety from fire or other emergencies.

**Emergency Escape Route** - The route that employees are directed to follow in the event they are required to evacuate the workplace or seek a designated refuge area.

**Exit Access** - A means of egress which leads to an entrance or exit.

**Exit** - That portion of means of egress which is separated from all other spaces of the building or structure by construction or equipment as required in the rules to provide a protected way of travel to the exit.

**Fire Inspection** - A visual check of fire protection systems and equipment to ensure that they are in place, charged, and ready for use in the event of fire.

**Fire Protection System** - This includes fire extinguishers and automatic fire sprinkler systems.

**Incipient Stage Fire** - A fire which is in the initial or beginning stage and can be controlled or extinguished by portable fire extinguishers without the need for protective clothing or breathing apparatus.

**Maintenance** - The performance of services on fire protection equipment and systems to assure that they will perform as expected in the event of a fire. Maintenance differs from inspection in that maintenance requires the checking of internal fittings, and devices.

#### **D. Responsibilities of Emergency Response Personnel**

1. Management: The City Manager and Department Heads are responsible to ensure that all employees are trained and informed about this Emergency Action Plan. Employees will be updated when the plan changes. Management will ensure that the proper safeguards and fire protection systems are maintained.
2. Supervisor: The supervisor plays a critical role in ensuring that all appropriate outside responders are notified. The supervisor will implement the call outs for emergency notification and to outside responders if employees have not already made the 9-1-1 call.
3. Emergency Coordinator: The Emergency Coordinator is appointed by the supervisor. The Emergency Coordinator's responsibilities include:
  - a) Assessing the situation and determining if the Emergency Action Plan should be implemented.
  - b) Directing the evacuation of personnel.
  - c) Making sure that Management has been notified to ensure that appropriate outside emergency services have been notified.
  - d) Directing the shutdown of operations when necessary.
  - e) Accounting for personnel involved in the incident including outside contractors and visitors to our facilities.

Note: The coordinators are not to enter a situation with uncontrolled emergency. These employees will be trained as to the limitation of their role.

3. Fire Protection System Maintenance: This individual ensures that all the fire protection systems are maintained and tested as required by OR-OSHA regulations and as outlined by the Insurance representatives.
4. All Employees are to follow this plan for preventing emergencies and conform to the plan's evacuation and emergency notification as outlined in the plan. All employees are encouraged to bring up any questions or suggestion on how to improve the plan with their supervisor.

#### **E. Potential Emergencies**

The following are the main type of potential emergencies at our facilities:

1. Fire

2. Chemical Spills or Releases
3. Medical Emergency due to an accident or illness
4. Bomb Threat
5. Violence
6. Terrorism that would be covered by Homeland Security requirements
7. Environmental Emergency: Wind storm, Flood, Earthquake

**F. Overall Policy**

1. All losses including fire, explosion, windstorm, flood damage, electrical, etc. shall be reported to the supervisors or managers. Report any incident which results in the operation of fire extinguishers even though there may not be an actual loss sustained.
2. Selected employees shall receive fire extinguisher training and the training will be updated once a year.

**G. General Procedures - Fire and Other Significant Chemical Releases**

**1. Emergency escape procedures and emergency escape route assignments.**

The types of immediate actions are based on nature of the emergency.

- a) For incipient fires, immediately implement fire control action and clear all non-essential personnel and public from the area.
- b) For chemical spills, emergency responders will initiate a defensive action to contain the spill from migrating. Depending on the nature of the chemical and extent of the spill the immediate employees may clean-up the spill or call in the Washington County Fire Department. No employee is to perform hazardous chemical clean-up duties that he or she is not trained in nor has the appropriate personal protective equipment.
- c) Use the nearest exit which will take personnel away from the fire.
- d) For an IMMEDIATE TOTAL SITE EMERGENCY EVACUATION employees and public are to all leave by using the nearest exit doors and assemble in the areas shown on building evacuation maps that are posted at the main exits on each floor of the buildings.
- e) For a NON-IMMEDIATE CONTROLLED EVACUATION, (e.g. advance notice of a flood condition) employees and public will be given instructions by the emergency coordinator or emergency responders on how to proceed.

- f) For LOCALIZED EVACUATIONS (only one BUILDING) the notification message will be given and everyone will move into the pre planned sites as described next.
  - g) Report to the Emergency Coordinator and wait for further instructions during emergency evacuation.
  - h) Maps outlining places of refuge will be posted in each building at the exit doors.
- 2. Procedures to be followed by employees who remain to perform critical operations before they evacuate.**
- a) Supervisors and trained personnel are responsible to ensure that critical operations are shutdown before they evacuate if it can be done without harm to the individual. Those operations could include the following depending on the emergency:
    - I. Isolating power to equipment which is on fire or related to the emergency. Employees expected to terminate power in emergency affected areas will be trained in how to shut off electrical power especially during a fire or flood.
    - II. If there is a motor fire, the motor should be turned off. *NEVER SPRAY WATER ON LIVE ELECTRICAL CONNECTIONS OR MOTORS.*
- 3. Procedures to account for all employees after emergency evacuation**
- a) The Emergency Coordinator and/or supervisors will account for the employees or public in their work areas. If a person is missing the information will be communicated to the outside emergency responders. Our employees are not to re-enter any facility that has been evacuated due to an emergency as we do not have the proper equipment or training.
  - b) The Emergency Coordinator will designate someone to direct the fire department to the fire and show them where the water hook-up is located.
  - c) No one is to leave the evacuation area site unless instructed by the person in charge.
- 4. To report fires and other emergencies call 9-1-1**
- 5. Job titles of persons who can be contacted for further information or explanation of duties under the plan:**
- a) City Manager
  - b) Finance Director
  - c) Library Director

- d) Public Works Director
- e) Police Chief

## H. Fire Protection Plan

The following procedures are additional policy issues that relate directly to fire protection and fire response actions.

The overall fire protection system is managed by the Public Works Director who hires a fire extinguisher contractor who performs the following activities:

1. Fire extinguishers are checked monthly and are tested based on the required frequency. Fire extinguishers are to be:
  - a) Accessible, fully charged and in operable condition at all times.
  - b) Visually inspected on a monthly basis to ensure they are fully charged and in their designated locations. The locations will be clearly marked.
  - c) Full annual maintenance check on each extinguisher that includes:
    - I. Inspecting and/or testing external and internal parts, checking the quantity and quality of the contents and assuring operational capability.
    - II. A qualified person must do the maintenance check. Persons deemed qualified by the Oregon Office of State Fire Marshal or local fire authorities will do the annual maintenance checks.
    - III. Keep a record of the maintenance check until a new check record replaces it. This record will be available to OR-OSHA on request.
    - IV. Replacement extinguishers will be provided or some other method of coverage will be used for the effected area while extinguishers are out of service for the maintenance check.
    - V. The inspection date and the initials of the person performing this inspection will be recorded on a tag attached to the extinguisher.
  - d) Any extinguisher that is not fully operable will be removed and replaced.
  - e) Internal examinations of fire extinguishers will be done at intervals not longer than the requirements set in Table 2 of the OR-OSHA Standard 437-002-0187 Portable Fire Extinguishers or when the extinguished shows corrosion or physical damage. Stored pressure dry chemical extinguishers require a 12-year hydrostatic test and subject to maintenance every 6 years. Most other types of fire extinguishers are hydrottested every 5 years.
  - f) Nonrechargeable extinguishers are good for 12 years from the date of manufacture and then will be taken out of service.

- g) Proper maintenance of equipment and systems installed on heat-producing equipment to prevent accidental ignition of combustible materials in accordance with established procedures.
2. Selection of Portable Fire Extinguishers: Portable extinguishers have been selected on the basis of the classes of anticipated fires as follows:
- a) Class A Fire: Ordinary combustible materials (paper, wood, cloth, some rubber and plastics).
  - b) Class B Fire: Flammable or combustible liquids and gases, greases and similar materials and some rubber and plastics.
  - c) Class C Fire: Energized electrical equipment where safety of the employee requires use of electrically non-conductive extinguishing media such as carbon dioxide or dry chemical.
- Note: Multipurpose, dry chemical extinguishers designated ABC are approved for use on Class A, B, and C fires.
- d) Class D Fire: Combustible metals
3. Distribution of Portable Fire Extinguishers: The proper distribution of portable fire extinguishers depends on three criteria:
- a) How far an employee must travel to the extinguisher.
  - b) How large an area is to be protected per extinguisher.
  - c) How the hazard has been classed (A, B, C or D).
  - d) Our policy on the distribution and sizes of portable fire extinguishers is:
    - I. Fire extinguishers shall be distributed in sufficient locations so that the actual travel distance employees must walk to reach an extinguisher (i.e., around partitions, through doorways and aisle ways) is generally not greater than 50 feet. Exception: For areas where there is a potential for a fire involving combustible cooking material (class K fires), fire extinguishers will be within 30 feet.
    - II. Distribution: extinguishers are located at all major door entrances and exits in each of our facilities.
    - III. **SEE POSTED MAPS OUTLINING LOCATIONS.**
4. All fire exits will be visibly marked with signs and kept accessible at all times.
- a) All fire exits will be unlocked from the inside to allow for quick exiting.

- b) All non-exits which could be mistaken for an exit will be marked with a sign stating "Not an Exit" to reduce confusion should an evacuation be needed.

#### 5. **Welding Safety System:**

Maintenance personnel are responsible to conduct welding in a safe manner and ensure that combustibles in the welding area are removed or protected. The staff is required to:

- a) Assign a Fire Watch for hazardous areas due to wood dust, combustible materials or debris.
- b) Wet area down prior to welding with hoses if the structure or area contains combustible materials.
- c) Keep a fire hose or extinguisher in the immediate area.

Outside contractors are expected to follow Fire Watch procedures. Employees in charge of any outside contractor operations will ensure that the contractor's are informed and equipped to handle necessary Fire Watch and site preparation.

#### I. **First Aid for Medical Emergencies**

First-aid trained personnel are not required at every place of employment. The 2009 rules require an employer to ensure that emergency medical services are readily available for treatment of injured employees. Employers must be able to identify the location of the nearest emergency response provider and the expected response time of that system.

##### 1. Emergency Number Posting

The emergency telephone number 9-1-1 - shall be posted next to every phone.

##### 2. First-Aid Supplies

First-aid supplies shall be in proximity to all employees. The supplies will be located in labeled safety supply/first-aid cabinets at the following areas in our facilities:

- City Hall – Kitchen cabinet
- Library – Shelf behind main check-out counter
- Public Works Shop – To right of office door

The specific first-aid items that are required as a minimum to be available in each first-aid kit include:

- a) 8 gauze pads at least 3" x 3"
- b) 2 large gauze pads which can be folded to a size of 8" x 10"
- c) 1 box of adhesive bandages
- d) 2 triangular bandages

- e) 1 package roller bandage at least 2" wide
- f) Wound cleaning agent
- g) Scissors
- h) 1 blanket or equivalent
- i) Latex gloves and CPR face piece for infection control
- j) Disinfectant hand cleaner
- k) Disinfectant soap

The first-aid supplies will be monitored by the Safety Committee.

Additional first aid supplies can be found in Police and Public Works vehicles.

3. Automatic External Defibrillators (AED's) are provided at City offices for emergency response to heart attacks. Most employees are trained in the use of AED's, however the equipment is designed for any lay person to assist persons experiencing a heart attack. AED's can be found at:
  - City Hall – Front counter
  - Library – Shelf behind main check-out counter

4. General Equipment Available for Bloodborne Pathogens.

The Police Chief will ensure that employees required to respond or provide CPR and first aid are provided appropriate personal protective equipment. This includes:

- a) Two pairs of disposable latex gloves
- b) Disposable safety goggles
- c) Disposable microshield with one-way valves for use in giving CPR

5. Sharps containers are located at the Washington County Fire station adjacent to City Hall.

## **J. BASIC EMPLOYEE EMERGENCY ACTION RESPONSE**

**Emergency escape procedures and emergency escape route assignments including but not limited to maps outlining exits, location of fire emergency pull down stations and fire extinguishers will be posted in work areas.**

1. During emergency evacuations employees will:
  - a) Use the nearest exit which will take you away from the fire or a chemical leak or release.

- b) Move to the refuge area outlined on the evacuation maps for your work area in the event of a fire/chemical or other emergencies.
  - c) In a chemical gas emergency move up wind of the leak.
  - d) Report to the Emergency Coordinator and wait for further instructions.
  - e) No employee is to leave the grounds until cleared by the Emergency Coordinator.
2. Upon discovering a fire that is not readily controllable with the materials and equipment at hand the employee must call 9-1-1.
3. Upon discovering an incipient (small) fire the employee should use the fire extinguisher and notify the supervisor.

The procedure is:

- a) Use fire extinguisher and alert fellow employees.
  - b) Immediately notify the City Manager or Department Head.
  - c) Provide the following information:
    - I. Location of emergency - specific as possible
    - II. Type and severity of the fire, chemical release, medical emergency or other
    - III. If electrical equipment is threatened
    - IV. Actions currently being taken, if any.
4. Upon discovering a chemical spill:
- a) Immediately notify 9-1-1 for the Washington County Fire Department.
  - b) If trained in the Spill Control plan immediately begin procedures to contain and control the release.
  - c) If significant release, immediately evacuate the area.
5. Medical Emergency
- a) Call 9-1-1 emergency as to need for emergency medical treatment.
  - b) Provide first aid to the best of your ability and training.
  - c) Contact the City Manager or Department Head.

**APPENDIX 1 Listing Emergency Response Procedures and Personnel**

**FIRE & MEDICAL EMERGENCIES** - 911

**CHEMICAL SPILL OR CONFINED SPACE RESCUE** - 911

**Fire Protection System Maintenance** – Safety Committee

**MANAGEMENT’S PHONE NUMBERS** -

City Manager Martha DeBry - 503-647-5555, 650-888-4163

Police Chief Bill Sydner - 9-1-1

Public Works Director Blake Boyles - 503-647-5555, (971) 404-4115

Finance Director Karen-Lee Stolte – 503-647-5555

Library Director Debra Boadie - 503-647-5051

## **APPENDIX 2 Employee Training Materials**

**A. Each employee** must be trained in the Emergency Action and Fire Protection Plan when hired and every year thereafter. Additional training may be also needed whenever the employee's responsibilities change and whenever the plan is changed.

### **B. Emergency Response Training Overview:**

1. The location and use of fire extinguishers. This includes the following information on types, stages of fires, and reactions to fires and emergencies:
  - a) In order to have a fire, three components are needed (see fire triangle): fuel (paper, wood, oil, grease, etc.), oxygen (air) and heat (source of ignition). Take away any one of these and your chances of a fire are eliminated.
  - b) Review the class of fire extinguishers and method of use.
  - c) Discussion on the dangers of:
    - I. Becoming disoriented in the panic of a fire.
    - II. The use of the fire hose as an escape aid.
    - III. Going onto a roof, or into a basement to fight a fire.
    - IV. Exploding chemical containers such as acetylene, oxygen, propane, barrels.
  - d) Limit employee fire fighting to incipient fires. Employees will only be trained to use an extinguisher to put out an incipient fire.
  - e) Every training session will emphasize employee safety and prevention of emergencies and fires.
2. Employees are trained in the use of fire extinguishers annually. Basic training on fire extinguishers should include the following information:
  - a) Extinguishing agent training:
    - I. Class A Fires
    - II. Class B Fires
    - III. Class C Fires
4. The location of fire exits and emergency evacuation routes.
5. Rescue and medical duties.
6. Procedures to follow should a facility evacuation be needed including:

- a) Evacuation routes.
  - b) Method for reporting to the Emergency Coordinator after an evacuation.
7. Means of reporting fires and other emergencies
- C. Each Department Head will ensure that his or her employees receive the proper training and will keep a record of the training.

## **CHAPTER 3. BLOODBORNE PATHOGEN EXPOSURE CONTROL PLAN**

### **A. Purpose**

This Bloodborne Pathogen Exposure Control Plan covers all of our staff with potential blood or body fluid exposure. The Plan Coordinator (Police Chief) is the supervisor, assigned to see that this plan is followed, reviewed, and updated annually.

The training required by the Bloodborne Pathogen Plan will be arranged or coordinated through your supervisor. The training will occur at the time of initial assignment and annually thereafter for all covered staff.

This Bloodborne Pathogen program describes the essential elements needed to protect our employees who might, in the expected course of carrying out their every day staff responsibilities, come in contact with human blood or body fluids.

It is our policy that all our employees will be trained in our Bloodborne Pathogen Program. There will be an annual refresher-training program.

### **This Exposure Control Plan includes the following topics:**

1. Universal Precautions (Engineering Control Methods)
2. Work Practices - Handwashing techniques
3. Personal Protective Equipment - Selection & Limitations
4. Housekeeping & Methods of Decontamination
5. Infective Waste Handling/Disposal Procedures
6. Hepatitis B Virus Vaccinations - Medical Surveillance
7. Hepatitis C Virus
8. Post Exposure Evaluation & Follow-up
9. Recordkeeping
10. Employee Training

### **B. Exposure Determination**

1. The OR-OSHA Bloodborne Pathogen standard applies to all employees whose routine job duties may result in potential exposure to human blood or other potentially infectious body fluids (OPIMs). OR-OSHA defines occupational exposure as meaning reasonably anticipated (reasonably expected) skin, eye, mucous membrane, or piercing of the skin contact with blood or other potentially infectious materials that may result from the performance of an employee's routine job duties.

2. These employees are Police personnel. This decision is based on the exposure determination as to which employees may incur occupational exposure to blood or other potentially infectious material. This determination was made without regard to the use of personal protective equipment.
3. Note: Employees who perform first aid as a "Good Samaritan Act" and not as an assigned responsibility will be provided training, and proper first aid kits are available in designated areas. These employees, however, will not be part of the pre-exposure Hepatitis B vaccinations. Any workplace exposure incident will be treated as listed in this plan's medical response section.
4. General "self-help" first aid kits and supplies are found in various locations in our facilities and buildings. These kits provide basic first aid supplies but are not indicated for use by designated first aid provider. Those designated first aid providers will have specially assigned first aid kits, which include basic barrier protection.

### **C. Applicable Legal Standard**

1. Federal: 29 CFR 1910.1030
2. State: OR-OSHA Bloodborne Pathogens Standard OAR 437 Division 2

### **D. Definitions**

**Bloodborne Pathogens** - Any pathogenic 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).

**Hepatitis B and C VIRUS (HBV and HCV)** - Diseases spread through sexual contact, blood transfusions, contaminated needles, and contact with body fluids on non intact skin and mucous membranes. (Viral infection of the liver.)

**Human Immunodeficiency Virus (HIV)** - The virus that can cause Acquired Immune Deficiency Syndrome (AIDS) and is spread in the same manner as HBV or HCV.

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

**Engineering Controls** - Controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

**Universal Precautions** - A set of protocols that are recommended by the Center for Disease Control and Prevention and now required by OR-OSHA to prevent skin and mucous membrane exposure when potential contact with blood or body fluids are anticipated.

### **E. Overall Responsibilities**

The following exposure control plan has been developed in compliance with the OR-OSHA standard. Our plan is designed to minimize, or eliminate, our employees' exposure to bloodborne pathogens.

1. A copy of this plan is in the Safety Manual and will be on file in the supervisor's office.
2. All new employees will read this plan at the time of their initial safety orientation and may have a copy if he/she wishes.
3. All employees will use "universal precautions" to prevent contact with blood and other potentially infectious body fluids. Where it is difficult to differentiate between body fluid types, all such body fluids shall be considered potentially infectious materials.
4. The supervisor will be responsible to:
  - a) Coordinate and provide resources to ensure that employee training is provided and documented.
  - b) Maintain a list of affected employees.
  - c) Coordinate and provide resources to ensure Hepatitis B vaccinations are offered and records are maintained.
  - d) Coordinate with the supervisor exposure incident investigations and appropriate medical treatment and follow-up for hepatitis and HIV sero-conversion. Confidential records will be maintained by the City Manager as confidential.
  - e) The supervisors will ensure that appropriate equipment is provided to employees to protect against contact with blood or other infectious body fluids, which includes:
    - I. Personal protective equipment required for protecting employee from blood or other infectious body fluids when performing their routine duties.
    - II. Placement of first aid kits, including infection control materials in all vehicles.
    - III. Appropriate personal protective equipment for use during accident investigation when blood may be present.

## **F. Methods of Compliance**

1. Universal Precautions: Any employee providing help to anyone who is injured or has blood or body fluids on them must use Universal Precautions. Universal Precautions are a set of protocols that are recommended by the Center for Disease Control and Prevention and now required by OR-OSHA to prevent skin and mucous membrane exposure when potential contact with blood or body fluids is anticipated.

The protocols are based on three basic premises:

- a) Treat all blood or body fluids as potentially infectious.
- b) Protective barriers must be used which reduces the risk of exposure.
- c) The barriers only supplement existing infection control measures such as hand washing.

Universal Precautions specifically include:

- a) Gloves must be worn when touching blood or body fluids or non-intact skin.
- b) Gloves must also be worn when handling items or surfaces obviously soiled with blood or body fluids.
- d) Bandage any cut, wound or break in the skin with watertight bandages to preclude contact with blood or body fluids.
- e) Wash hands thoroughly with soap and water for at least 10-20 seconds after contact with blood or body fluid or handling contaminated articles. This procedure should be done even after wearing gloves.
- f) Employees shall use a mouth guard (Microshield) when performing CPR.

The following procedures need to be used when washing hands/body as part of our Universal Precaution measures:

- a) Wash hands after removal of gloves or whenever you had contact with body fluids. If water is not immediately available then alcohol or antiseptic towelettes may be used.
- b) Remove gloves after first washing with soap and water. Washing only helps reduce the risk of contacting blood/body fluids when removing the gloves. (Disposable gloves are not being washed for re-use.)
- c) Pull glove from skin using outer top part of glove so the other glove does not contact the skin. To pull off the glove with the other ungloved hand place your fingers at the top interior of the glove and pull off the glove.
- d) Follow same procedures for non-disposable gloves but ensure thorough decontamination prior to removal. Allow the gloves to dry and store gloves so that they do not degrade or become contaminated.
- e) Use soap and warm water, hot water removes oil from the skin. The hands and forearms should be washed.
- f) Rub your hands vigorously: friction by rotary motion and rinsing under running water aids in the mechanical removal of bacteria.
- g) Wash all surfaces, including the back of hands, wrists, between fingers, under fingernails. Your hands should be washed well for 10 to 20 seconds.

- h) Rinse well.
  - i) Dry hands with paper towel.
  - j) Turn off the water using a paper towel instead of bare hands.
  - k) Full showering should be done as soon as possible if body contamination occurred.
- Note: Frequent hand washing destroys the natural oils and causes drying and cracking of the skin. Keeping the skin intact helps to prevent the invasion of bacteria and possible secondary infections. Hand lotion should be applied.*
- l) If you have open cuts or wounds, you should be wearing waterproof bandages.
2. Engineering and Work Practice Controls will be used to eliminate or minimize employee exposures. Where occupational exposure remains after institution of these controls, personal protective equipment will also be used.
- a) The supervisor will identify, evaluate, and select engineering and work practice controls including safer medical devices on an annual basis. This evaluation will involve non-managerial front-line employees who are responsible for direct patient care.
  - b) After a device is evaluated and selected, management will make a decision on implementing that device.
  - c) If a device is not purchased because of employee or employer concerns, those concerns will be documented by the supervisor. However, if the employer does not purchase a device that had employee support, the employer must also document the employee support as well as the justification for not purchasing that device.
  - d) If a device is purchased without the consent of the employees who evaluated it, the employer must document the employees' concerns as well as the employers' justification for purchasing that device.
  - e) All documentation required will be kept as part of this written Exposure Control Plan.

## **G. Personal Protective Equipment**

### **General Equipment Available**

Your supervisor will ensure that employees are provided appropriate personal protective equipment. This includes:

1. FIRST AID KITS designated for authorized first aid providers shall include at least:
  - a) Two pairs of disposable latex gloves

- b) Disposable safety goggles
  - c) Disposable microshield with one-way valves for use in giving CPR
2. Sharps containers are located at the Washington County Fire station adjacent to City Hall.
  3. When picking-up sharps (such as hypodermic needles) and broken contaminated glass, employees need to wear latex gloves and use tongs, rather than their fingers. Contaminated needles must not be broken, bent, recapped, or removed.

### **Limitations of Personal Protective Equipment**

1. **Gloves:** Gloves can be torn or punctured. Gloves should be changed after contact. Disposable gloves should not be washed or disinfected for reuse. They also should not be used when visibly soiled, punctured, or when their ability to function as a barrier is compromised. Hands should be washed as soon as possible after removing gloves. If water is not available then disposable hand washing wipes should be used.
2. **Face / Eye Protection:** These items also need to be clean and maintained in good repair. They should be discarded if they do not function as indicated by the manufacturer's use and maintenance documentation.

### **Location of Personal Protective Equipment**

Proper PPE is located in the first aid kits that are in the police vehicles.

PPE needs to be maintained cleaned and kept in sanitary condition.

### **H. Housekeeping Requirements**

1. Hepatitis virus can survive for at least a week in a dried state at room temperature on work surfaces. HIV survival is less: 24 to 48 hours. As a result, it is important to ensure proper cleaning of all materials or surfaces contaminated with blood or body fluids.
2. Cleaning up blood or body fluids shall be done as soon as possible. Staff will use basic cleaning products shall be effective environmental disinfectants. The chemical products use instructions need to be followed for proper dilution and application methods.
3. If the commercial disinfectants are not used fresh bleach solution can be made and is effective. 500 ppm (parts per million) free available chlorine (a 1:100 dilution of common household bleach - approximately 1/4 cup bleach per gallon of tap water) is effective. The bleach solution must be made fresh each day.
4. Cleaning and disposing of PPE.
5. Disposable latex or vinyl gloves or clothes should be disposed of in the regular trash after use unless soaked with blood or OPIM.

6. Goggles (that are not disposable) should be cleaned with soap and water and then wiped down with alcohol or other germicides if contaminated with blood or OPIM.
7. Puncture resistant gloves that become soiled will need to be disposed of, unless they are coated with a plastic material that is cleanable or are of washable leather.
8. Employee will ensure that all garments penetrated by blood or body fluids are removed immediately or as soon as possible.
9. Contaminated laundry shall be placed and transported in bags that are labeled or color-coded. Whenever the laundry is wet and may soak through or leak from the container, it shall be placed and transported in leakproof red labeled bags.
10. Costs for laundering and cleaning of employee clothing or uniforms contaminated in the course of work performance will be borne by our organization.

#### **I. Biohazard Waste Handling/Disposal Procedures**

1. A biohazard waste which requires special handling and disposal is defined as "any liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other infectious materials and are capable of releasing these materials during handling; shall be disposed of immediately in the proper containers."
2. The biohazard containers or bags must be able to contain all contents and prevent leakage of fluids during handling, storage, transport, or shipping.
3. Blood and other body fluids can be disposed of down the sanitary sewer in Oregon.
4. Though we do not expect to encounter any syringes (sharps), if they are found the following procedure must be followed. Sharps, including blood contaminated utility knives or broken pop bottles that are found shall be disposed of in a closeable, puncture resistant, disposable container that is labeled and color coded - red.
5. Procedures for picking-up sharps:
  - a) Use latex gloves or vinyl gloves.
  - b) Use mechanical equipment (pliers, shovels, or dustpans) to pick up contaminated utility knives or scissors. Temporarily store in container that will avoid punctures.
  - c) Dispose of needle in properly marked sharps container at Washington County fire station.
6. When transporting containers of contaminated sharps and other regulated wastes from the use area, the containers shall be closed to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
7. The method of removing "contaminated waste"\* containers will include:

- a) Refer to definition of Biohazard waste, listed above.
- b) Sealing the sharp containers and any Biohazard bags (red bags) containing infectious waste materials.
- c) The containers will be handled separately from routine waste disposal system.

#### **J. Hepatitis B Virus (HBV) Vaccination**

1. All employees listed under the Exposure Determination are eligible to obtain the vaccination series at no cost and during normal working hours.
2. First Aid providers, as incidental to the employee's job duties, are not required to be provided HBV pre vaccinations, based on current OR-OSHA rule interpretation. Our operations will currently not provide the vaccinations unless there is a workplace exposure incident. If the employee declines to be vaccinated after an incident a declaration declining will need to be signed.
3. The employees being offered pre-vaccinations series will go through their supervisor within 10 working days of initial assignment. An exception will be made if the employee can provide documentation of having previously received the complete hepatitis B vaccination series, and antibody testing shows that the employees is immune, or the vaccine is contraindicated for medical reasons.
4. Employees will incur no cost for the medical evaluations, medical procedures including the hepatitis B vaccination series and post exposure follow-up or laboratory tests. All the procedures will follow the U.S. Public Health Service recommendations and under the supervisor of a licensed physician.
5. Employees who decline the hepatitis B vaccination offered them shall sign the OR-OSHA required waiver indicating their refusal. At any time the employee may change his/her mind and the vaccination series will be offered. (See APPENDIX 2).
6. If a routine booster of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster will be made available to all affected employees.
7. Any employee who has a workplace exposure is covered by the incident and medical surveillance provisions of this plan and if they have not previously taken the HBV vaccination will be urged to be vaccinated immediately.

#### **K. Exposure Incident Evaluation & Follow Up**

Any employee who has an exposure incident (they are exposed to blood or body fluids) shall immediately notify their supervisor who will refer the employee to their private physician or to a local health care facility for a complete medical evaluation and follow up.

1. The supervisor will provide the treating physician or healthcare facility with:
  - a) A copy of the Bloodborne Pathogens rule, 1910.1030.
  - b) A copy of the Bloodborne Pathogen Exposure Incident/Accident Report.

- c) Any medical records on the exposed employee regarding HBV vaccine status.
2. The health care provider will provide the employee with a written opinion of the evaluation.

#### **L. Post Exposure Investigation**

As part of the follow-up on an “exposure incident” the Safety Committee will conduct an investigation (keeping all personal health information confidential).

1. It is critical to remember that an exposure incident is an "unprotected exposure to blood or other body fluids including a skin exposure involving contact with blood, especially when the exposed skin is chapped, abraded, or afflicted with dermatitis, or a needle/sharp exposure to blood or body fluids during the course of their work."
2. Small splashes of blood on intact skin is not usually classed as an exposure incident.

The following steps are to be taken as part of the post exposure investigation:

1. Report the incident/accident immediately to your supervisor who will contact the Safety Committee who begins the process of investigating the incident and scheduling a confidential medical evaluation and follow-up activities for the employee.
2. The supervisor and employee will ensure that the circumstances of exposure are recorded and investigated. The enclosed Exposure Incident Form will be used to ensure that relevant information including the routes of exposure, the activity in which the employee was engaged at the time of exposure, and the extent to which appropriate work practices and protective equipment were used and a description of the source exposure shall be recorded.
3. Treatment will be sought as soon as practical but at least within 24 hours of the incident.
  - a) Treatment involves information, if possible, about the source person and employee’s medical condition and vaccination status.
  - b) Once an exposure has occurred, a blood sample will be drawn after consent is obtained from the source individual unless identification is infeasible. The blood will be tested for hepatitis B and antibody to HIV as soon as feasible. The arrangement to obtain consent and testing will be performed by the Human Resource Department in conjunction with hospital, coroner or treating Physician. (The physician or clinic will provide the consent form.)
  - c) Results of the source individual’s testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity of the infectious status of the source individual. This will be done by the health care professional treating the employee.
  - d) An exposed employee’s blood shall be collected as soon as feasible and tested after consent is obtained. If baseline blood is drawn, but the employee does not

consent for HIV serologic testing, the sample shall be preserved for at least 90 days. If within 90 days of the exposure incident, the employee elects to have the sample tested, such testing will be done as soon as feasible. Additional HIV follow-up testing shall be offered based on USPHS recommended schedule. Currently that includes a 6 week, 12 week and 6 month HIV test.

## **M. Recordkeeping**

1. Medical Records shall be established and maintained for each employee with occupational exposure.

The City Manager will maintain the current employee medical records during length of employment. The City will keep the records after the employment for a minimum of 30 years. The record will be confidential and will contain the following information as required by the OR-OSHA standard:

- a) Name and social security number.
  - b) Copy of employee's vaccination status and any medical records that are relative to employee's ability to receive the vaccination.
  - c) Copy of the results of examinations, medical testing, and follow up procedures as the result of a post-exposure incident medical treatment.
  - d) Copy of medical professional's written opinion. A copy of the information provided to the medical professional.
2. Sharps Injury Log:

The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

- a) The type and brand of device involved in the incident.
  - b) The department or work area where the exposure incident occurred.
  - c) An explanation of how the incident occurred.
3. Training Records: The City Manager and Plan Coordinator will maintain the training records for minimum of 3 years. This includes:
- a) Dates of the training sessions.
  - b) Contents or summary of the training.
  - c) Names and qualifications of the persons conducting the training.
  - d) The names and job titles of all persons attending training sessions.

## **N. Training and Communication**

The following lists the topics required to be covered in the annual Bloodborne Pathogen Program initial and annual training.

1. An accessible copy of the bloodborne standard and an explanation of its contents.
2. A general explanation of the epidemiology and symptoms of bloodborne diseases.
3. An explanation of the modes of transmission of bloodborne pathogens.
4. An explanation of the exposure control plan and the means by which the employee can obtain a copy of the written plan.
5. An explanation of the appropriate methods of recognizing tasks and other activities that may involve exposure to blood or other potentially infectious materials.
6. An explanation on the use and limitation of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment.
7. Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
8. An explanation of the basis for selection of personal protective equipment.
9. Information on the hepatitis B vaccine, including information on its effectiveness, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
11. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and medical follow-up that will be made available.
12. An explanation of the signs and labels and /or color coding.
13. An opportunity for interactive questions and answers with the training instructor.

The training program will be given initially AND annually or all staff who may have blood or infectious body fluid contact.

The training is to be documented and a written record kept in the employee's training file for at least 3 years. Each employee is provided access to all the training materials including video tape program and instructor's background information.

## **CHAPTER 4. CONFINED SPACE ENTRY PLAN**

### **A. Purpose**

The following program defines the procedures for confined space entry under Federal OSHA "Permit Required Confined Spaces" 29 CFR 1910.146.

Only authorized employees shall enter a confined space. The supervisor is responsible to see that the proper preparation entry protocols are completed prior to entry and maintained during entry. The Public Works Director is responsible for overseeing that confined space entries are made in compliance with City procedures.

Remember if you have questions about any space please consult with the supervisor or the entry supervisor prior to entering a confined space.

### **B. Applicable Legal Standards**

1. Federal: 29 CFR 1910.146 "Permit Required Confined Space"

### **C. Procedures**

This written program lists the procedures that must be followed to implement the Confined Space Entry Program. The procedures include:

1. Employee Training
2. Atmosphere Testing
3. Identification of Confined Spaces
4. Marking of Confined Spaces
5. Entry Procedures
6. Entry Permits

The City of North Plains has a limited number of confined spaces within the potable water system.

#### **Examples of Confined Spaces that require permits include but are not limited to:**

1. Underground Vaults
2. Water Reservoirs (above ground)

### **D. Definitions**

The following definitions are for terms used throughout this document and are based on the Federal OSHA 29 CFR 1910.146 Permit Required Confined Space regulation definitions:

**Confined Space** - A space that is large enough and so configured that an employee can bodily enter and perform assigned work. It has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits) and is not designed for continuous employee occupancy.

**Permit-Required Space** - A confined space that contains or has a potential to contain hazardous atmosphere. It has a material that has the potential for engulfing an entrant, has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section. It also contains any other recognized serious safety or health hazard.

**Vent and Test Certificate Space or Permit-required Space** - A confined space that can be treated with alternative procedures.

1. If "Alternative Procedures" can safely be used, OR-OSHA does not require a full permit, standby attendant, or emergency rescue procedures to be implemented.
2. The space must be maintained in safe condition.
3. If test data shows a change that could be hazardous then the employee must immediately leave the space.
4. The following conditions must be met for a permit space to be classified as vent and test permit space:
  - a) The only hazard posed by the permit space is a potential or actual hazardous atmosphere and that continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry. This also assumes that all physical hazards (such as mechanical equipment) can be safely locked-out from outside the space prior to entry.
  - b) The entry supervisor has air monitoring data to show that the air quality is safe and is maintained during the work in the space. A written record of the testing is maintained.
  - c) Since a standby person is not required, any entrance covers, manhole covers or pit/sump lids that are removed shall promptly have the opening guarded by a railing, temporary cover, or other temporary barrier. This barrier or warning device will prevent an accidental fall into the opening and also protect each employee working below from foreign objects falling in the space.
  - d) Before an employee enters the space, the internal atmosphere shall be tested for potential hazards. The entry supervisor will determine the type of direct reading testing, but at a minimum it shall include oxygen deficiency and carbon monoxide monitoring. Testing shall be done periodically while the employee(s) is/are in the space.
  - e) Continuous forced air ventilation shall be used and the air must be from a clean source.

- f) If a hazardous atmosphere is detected then the entrant will immediately leave the space and entry would only be made with an entry permit, if changes in the space cannot render it fully safe, this will continue on a permit-required space.

**Reclassification Certificate** - A confined space where all serious hazards can be eliminated prior to entry can be reclassified to a Non-Permit Space. The certificate shall document the steps taken to temporarily reclassify the space as a Non-Permit Required Confined Space.

**Non-Permit Space** - A confined space that does not contain or (with respect to atmospheric hazards) have the potential to contain any hazard capable of causing death or serious physical harm.

1. Examples include: vented vaults, motor control cabinets, crawl spaces, and dropped ceilings. Although they are “confined spaces”, these spaces have either natural or permanent mechanical ventilation to prevent the accumulation of a hazardous atmosphere, and they do not present engulfment or other serious hazards.

**Entry** - Entry into a confined space occurs as soon as any part of the entrant's body breaks the plane of an opening into the space.

**Entry Permit** - A written permit which defines the conditions under which the space may be entered.

**Permit Authorizing Personnel** - The person who is trained and authorized to be responsible for determining if acceptable entry conditions are present at a permit space:

1. Where entry is planned
2. When authorizing entry
3. Overseeing entry operations
4. Terminating entry as required by this program.

*Note: A permit authorizing person also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this plan for each role he or she fills. Also, the duties of an entry supervisor may be passed from one individual to another during the course of an entry operation.*

**Hazardous Atmosphere** - An atmosphere which exposes employees to a risk of death, incapacitation, injury or acute illness from one or more of the following causes:

1. A flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL).
2. An atmospheric oxygen concentration below 19.5% or above 23.5%.
3. A combustible dust environment.
4. An atmospheric concentration of any substance for which an employee exposure would exceed the permissible exposure limit (PEL).

5. Any atmospheric condition recognized as immediately dangerous to life or health.

**Immediately Dangerous to Life or Health (IDLH)** - Any condition that poses an immediate threat of loss of life; or may result in irreversible or immediate-severe health effects or other conditions which could impair escape from the permit space.

**Permissible Exposure Limits (PEL)** - An airborne chemical exposure limit established by OR-OSHA which cannot be exceeded without proper respiratory protection and the implementation of feasible engineering controls.

**Enclosed Space** - A space that has a limited means of entry or egress, that is designed for periodic entry by employees under normal operating conditions, and that is not expected to contain a hazardous atmosphere, but may contain one or more unusual conditions. Enclosed spaces include manholes and vaults that provide employees access to electrical generation, transmission, and distribution equipment.

## **E. General Responsibilities**

1. **Supervisors**: The supervisors are responsible for ensuring that the proper safety equipment is available and used for the safety of the employees during confined space entry. A designated employee may be assigned the responsibility for directing the permit confined space entry. The supervisors are responsible for maintaining copies of all permits issued for one year. The permits will be reviewed during the annual program evaluation. The supervisor will conduct an annual evaluation.
2. **Entry Supervisor**: OR-OSHA uses the term entry supervisor as designation that someone must be in charge of the planned permit entry. The person does not have to be in management. An employee who has received additional training and has the authority to authorize employee to enter into confined spaces can be designated as an entry supervisor. The entry supervisor's duties include:
  - a) Evaluation of all confined spaces including those that are non-permit to ensure that all hazards can be or are controlled.
  - b) Completion of the work permit indicating the safety equipment required.
  - c) Determining special precautions to be observed.
  - d) Determining the number of employees permitted to enter.
  - e) The duration of the permit.
  - f) Cancellation of the permit.
3. **All Employees**: All Employees are required to follow the appropriate confined space entry procedures and ensure that the equipment in use is performing properly. Employees authorized to make confined entries are trained in the confined space program and entry procedures.

## **F. Confined Space Classifications and Safety Procedures**

### **PERMIT ENTRY - SAFETY PROCEDURES**

**Entry into confined spaces will occur only after the following rules are met:**

#### **Training**

1. Only staff that has been trained in our entry policies and procedures will perform work in a confined space. Supervisors shall ensure that only authorized employees who have received training in the hazards of confined space entry and proper entry procedures are permitted to enter confined spaces.
2. A list shall be maintained by the supervisor of all employees trained and certified to participate in the Confined Space Entry Program at each of the following levels:
  - a) **Level 1** Authorized Entrants
  - b) **Level 2** Entry Supervisor and Authorized Attendants
  - c) **Level 3** Permit Preparer

#### **Inspection**

1. The safety equipment to be used in a designated confined space must be inspected on a routine basis by a designated employee. The employee will inspect and/or test the equipment to ensure that it is in working condition as outlined by the OR-OSHA rules or by the manufacturer's specifications. The inspection frequency varies depending on specific rule requirement(s) and by the manufacturer's specifications. Equipment not functioning will be repaired by authorized manufacturer's representatives.

The equipment includes, but is not limited to:

- a) Ladders
- b) Man-hoists
- c) Safety harness and life lines
- d) SCBA
- e) Gas monitors including oxygen monitors
- f) Power ventilators
- g) Communication systems (voice or radio)

**Entry**

1. All Confined Space entries will be performed following the procedures, outlined in detail in this chapter.
2. In order to determine if a permit is required, use the "Confined Space Assessment Worksheet" in forms section.
3. A Confined Space Permit or an Alternate Entry/Vent and Test Permit must be issued for confined space entry. A sample Confined Space Entry Permit form can be found in the forms section. Permits must be properly filled out in advance and followed.
4. The permit is required to be kept for one year. The Supervisor will maintain a copy of each permit to summarize information on the annual review of this policy.
5. Permits may be granted for the duration of the project requiring confined space entry. The permit is only valid as long as the original physical conditions set out in the permit continue to be met.
6. The permits are to be posted at the worksite.

**Air Testing**

1. Testing of the air within confined spaces shall be performed prior to entry to determine oxygen content, toxic gas potential and flammable or explosive atmospheres. The initial test will be taken in the space to be entered prior to entry.
2. Entry into a confined space is prohibited until initial testing of the atmosphere has been done from outside the space. Entry without respiratory equipment will only be made after the appropriate tests show that the atmosphere is safe.
3. The tests performed shall include those for oxygen content, flammable gases, and carbon monoxide monitoring channel. The entry supervisor, depending on the circumstances, may require additional tests.

**Acceptable Atmosphere without Air- Supplied Respirator**

1. If the space meets the following air quality standards then entry may be done without a SCBA or continuous airline with escape bottle.
2. Oxygen level between 19.5% - 23.5%.
3. Flammable vapors below 10% LEL (Note: many flammable gases are toxic at very low percentages in air thus 10% of the LEL may be a toxic exposure.) The person authorizing entry should carefully judge all readings on the combustible gas sensor.
4. Hydrogen sulfide below the PEL of 10 ppm.
5. Carbon Monoxide below the PEL of 35 ppm.

*Note: If unusual odors are present, entry shall be terminated immediately. The presence of odors is not always related to the degree of hazard just as the lack of odor does not mean that it is safe; however, odors could be the result of an accidental spill which could affect your health and safety. The supervisor shall be notified to ensure that the reasons for the unusual conditions aren't due to an accidental chemical spill, release, or process.*

### **Ventilation**

Ventilation of confined spaces shall be used to provide adequate levels of oxygen to dilute toxic and flammable gases and to improve general air quality. The ventilation equipment shall be explosion proof if it is placed inside the confined space.

### **Other Chemicals**

The Material Safety Data Sheets (MSDS) for all products and cleaning materials used in the confined space must be reviewed before entry unless the products have already been covered with the employees in the routine hazard communication training.

### **Electrical**

Only double insulated electric tools or tools on a ground fault circuit interrupter system are used in confined spaces. All portable lights and tools shall be explosion proof when working a confined space where there is a potential flammable or explosive atmosphere.

### **Lockout**

Mechanical and electrical equipment installed in the confined space must be disconnected from its power source and locked out. Our lock-out program must be followed (See Chapter 6 Energy Control Plan - Lock-out Policy for further details).

### **Emergency**

1. The Entry Supervisor (Permit Authorizing Personnel) will ensure that the proper rescue procedures and equipment necessary to rescue an entrant from a permit space are implemented and provided. This includes:
  - a) Safety harness, life line and tripod hoist or other type of rescue devices as needed for the permit spaces being entered which are a vertical entrance of more than 5 feet.
  - b) Communication with other entry team members by mobile radio, telephone or other effective means is provided.
  - c) First aid and emergency response by notification of the First Aid/CPR trained member and 9-1-1 rescue assistance.

### **Traffic Hazards**

Employees working in roadways/walkways need to ensure their safety and that of their coworkers by proper control of traffic hazards and access to open manholes. All necessary barriers and traffic control devices shall be used.

### **Entrance Covers**

When entrance covers are removed, the opening shall be promptly guarded by the outside attendant or, in case where the outside attendant is not in the immediate area or alternative procedures are in use and only one employee is present, then guarding will be done with the use of:

1. Portable railings
2. Temporary covers
3. Other temporary barriers

The barriers will protect the opening to prevent other employees from accidentally falling into the opening and preventing foreign objects entering the space.

### **Ladders**

A ladder, if used for an entry into vessel, must remain at the site throughout the work period.

### **Retrieval System**

A retrieval system shall be used for each full permit entry unless the retrieval system would increase the overall risk of the entry or would not contribute to the rescue of the entrant. For entries using the retrieval system, each entrant to a Permit Required Confined Space shall wear a chest or full body harness with a retrieval line. Wristlets may be substituted if the chest or full body harness is not feasible or creates a greater hazard. The other end of the retrieval line shall be attached to a mechanical lifting device or a fixed point outside of the confined space. A mechanical lifting device shall be used to retrieve personnel from vertical type confined spaces that are more than 5 feet deep.

A retrieval system is not usually considered for use during entries conducted using Vent & Test, Alternative Procedure, or Reclassification Certificates.

### **Hot Work**

When any hot work involving sources of ignition including welding and burning is done in a confined space, all fire hazards and flammable atmospheres must be controlled. All combustible material shall be protected. Hot work permit and instructions are found in the forms section. These procedures are in addition to the general Hazardous Atmosphere Permit Entry requirements.

**Contractors**

When we hire an outside contractor to conduct confined space work the Project Manager/Supervisor must ensure that the contractor is provided with information about the hazards associated with the confined spaces involved in the contract.

## **CHAPTER 5. HAZARD COMMUNICATION PROGRAM AND CHEMICAL HAZARDS**

### **A. Purpose**

The Hazard Communication Program is an integral part of our employee safety and health awareness program. The City of North Plains has adopted chemical hazard control programs to ensure our compliance with various different hazardous material regulations and the safety of our employees.

The purpose of this program is to provide information about chemical hazards and the control of hazards via our comprehensive Hazard Communication Program which includes container labeling, Material Safety Data Sheets (MSDS) and employee training. The goal of the program is to eliminate the possibility of illnesses and injuries caused by exposure to chemicals.

1. This written program will be available at:
  - a) Public Works
  - b) City Hall
2. The program is available for review by any employee, outside contractors, or the Oregon OSHA compliance staff during an inspection.

### **B. Applicable Legal Standards**

1. Federal: 29 CFR 1910.1200 "Hazard Communications"
2. State: OAR Division 437 Division - 2
3. State: OAR 437 - Division 153 "Pipe Labeling"

### **C. Definitions**

**Hazardous Chemical** - Any chemical which is a physical hazard or a health hazard (potential injury or disease agent).

**Hazard warning (label)** - Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning to convey the hazards of the chemical in the container.

**Material Safety Data Sheet** - Written or printed material concerning a hazardous chemical which is prepared in accordance with OAR Division 2 and 29 CFR 1910.1200.

### **D. General Responsibilities**

1. **Management**: It is the management's overall responsibility to see that hazardous materials are handled safely and that employees are trained in the physical and health hazards associated with the chemicals.
2. **Supervisor and/or Department Manager**: The supervisor and the Department managers will work together to ensure employee training, appropriate container labeling,

availability of the MSDS, maintenance of the chemical inventory, and information is provided to outside contractors. The supervisor will see that the initial Hazard Communication orientation for all new employees, volunteers, and temporary employees is given.

3. Supervisor: Each supervisor is responsible for maintaining MSDSs for their work areas. The supervisor will ensure that all their employees are trained on specific chemical hazards and necessary precautions. They are also responsible to see that secondary containers are labeled.
4. Staff who order chemical products: Staff who orders chemical products are to ensure that original containers have legible labels and that MSDS have been received so that the product can be delivered.
5. All Employees: All Employees are responsible to read the labels and MSDS for products they use. Attend the hazard communication training and properly handle chemicals per the labels, MSDS and training. Employees generating secondary containers are responsible to label the containers or see that they are using properly labeled containers.

## E. Procedures

### 1. Container Labeling:

#### a) PRIMARY CONTAINER LABELING: (Chemical container as received by manufacturer)

##### I. Oregon and Federal OSHA requires that all chemical manufacturers, importers, and distributors properly label all shipments of hazardous chemicals with:

1. The identity of the chemical.
2. Hazard warnings.
3. The name and address of the manufacturer.

##### II. No container of hazardous chemicals will be released for use until the label information is verified by department staff who ordered the product.

##### III. All employees are to be aware that the label must be maintained on the chemical container and will notify their supervisor or environmental services representatives if any unlabeled container(s) are discovered in their work area.

#### b) SECONDARY CONTAINER LABELING: Containers that hold transferred hazardous materials from the original to a secondary use container are required to be labeled.

- I. The employee in charge of the transfer must ensure that a hazard warning label is placed on the container. Portable containers which only one employee uses and is transferring chemical to be completely used during his or her shift (immediate use) are not required to be labeled. But if more than one employee uses the containers or material is stored over to the next shift, it must be labeled.
- II. The hazard warnings must be legible, in English and prominently displayed. This includes labeling the product name and hazard warning. If a label becomes torn or not legible the employee using the product must relabel it.
- III. Employees will use permanent marking pens to label the secondary containers.

## **2. Department of Transportation Placards**

- a) Vehicles that are transporting hazardous materials may be required to have Department of Transportation placards.
- b) Exceptions for public sector entities include persons responsible for determining whether or not placarding is required on a vehicle should have a good understanding of the Department of Transportation placarding regulations.

## **3. Material Safety Data Sheet (MSDS)**

- a) Chemical manufacturers and importers are required by these rules to develop a MSDS for each hazardous chemical product. The MSDS contain detailed information about the health and physical hazards associated with the product. It is the responsibility of the individual ordering or purchasing the chemical to ensure that they receive an MSDS with the shipment of new chemicals or provide the MSDS where there has been a change. To ensure that we receive the MSDS, the following notification should be added to all chemical purchase orders:
  - I. "Material Safety Data Sheets will be sent to the City of North Plains Public Works Director for each new chemical product purchased and an updated MSDS will be sent when the manufacturers or importer changes the MSDS."
- b) If MSDS is not given to receiving then receiving will notify the individual who ordered the chemical and the product will not be released for use until the MSDS is available.
- c) When MSDSs are received by the various departments they are to be forwarded to the Public Works Director for copying, distribution and inclusion in the MSDS binders and on the inventory list.

- d) MSDSs are available to all our employees for review during each work shift. If MSDSs are not available or new chemicals in use do not have MSDSs, immediately contact your supervisor.
- e) A list of Hazardous Chemicals will be kept as part of the MSDS index - table of contents. The lists (index) will be updated as new chemicals are purchased. The Public Works Director is responsible to maintain the current inventory list of chemicals.

#### 4. Employee Training and Information

- a) A key component of this program is training employees about the hazardous chemicals which they may come in contact. Our training program is done in two parts.
  - I. The initial orientation is done by the Department Supervisor. The elements of training covered in the initial orientation includes:
    - 1. An overview of the requirements contained in the Hazard Communication Rules, Division OAR 437 Division 2 and 29 CFR 1910.1200.
    - 2. Location and availability of our written hazard communication program.
    - 3. How to read labels and review an MSDS to obtain appropriate hazard information.
- b) The employee's supervisor will review the specific chemicals, hazards and precautions needed in the employee's work area. The training program will cover the following elements:
  - I. Review of the chemicals present in the workplace.
  - II. Physical and health effects of the hazardous chemicals.
  - III. Methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area.
  - IV. How to lessen or prevent exposure to these hazardous chemicals through usage of control/work practices and personal protective equipment.
  - V. Steps we have taken to lessen or prevent exposure to hazardous chemicals.
  - VI. Emergency procedures to if our employees are exposed to these hazardous chemicals.
- c) It is critically important that all employees understand the training. If you have any additional questions please contact your supervisor. Each employee will fill-

out a training verification form which asks the employee if he or she understood the training.

- d) When new chemicals are introduced, supervisors will review the above items as they relate to the work area.

#### **F. Hazardous Non-Routine Tasks**

1. Periodically, employees are required to perform hazardous non-routine tasks. Prior to starting work on such projects, each affected employee shall review information about hazards to which they may be exposed during such an activity. This shall be the responsibility of each supervisor.
2. The training information will include but not limited to:
  - a) Specific chemical hazards.
  - b) Protective equipment and safety measures which must be utilized.
3. Measures that have been taken to lessen the hazards including ventilation, respirators, presence of another employees and emergency procedures.
4. The MSDS for employees to review.

#### **G. Hazards of Chemicals in Piping Systems**

1. All hazardous materials carried in piping systems are required to be labeled under OAR 437- 002- 0378 "Pipe Labeling".

"Pipes and piping systems which contain hazardous substances (any health or physical hazardous agent) or transport substances in hazardous state shall be labeled..."
2. The pipes must be colored coded or have lettered labels. The label shall give the name of the contents in full or abbreviated form. The labels may be posted in the area of the pipe/piping systems. The labeling shall be applied, at a minimum, at the beginning and end of continuous pipe runs. A complete hazard label is not required on pipes.

#### **H. Informing Contractors**

Our organization occasionally uses outside contractors for some projects, as a result, we must inform the contractor of any chemical hazards his/her employees may be exposed to. The following methods will be used to inform outside contractors of the potential chemical hazards in their work areas:

1. To ensure that outside contractors work safely in our plant, it is the responsibility of the supervisor to ensure that we provide the required chemical information:
  - a) Hazardous chemicals to which they may be exposed while on the job site.
  - b) Precautions the employees may take to lessen the possibility of exposure.

- c) Location of MSDS for chemicals they are potentially exposed to.
2. If additional information is needed the Public Works Director should be contacted for assistance.

**I. Chemical Hazards Requiring Additional Compliance Issues**

1. There are potential chemical exposures that have additional OR-OSHA requirements that our employees may be exposed to. (Examples: Hexavalent chromium, lead, asbestos, silica, vinyl chloride, cadmium, benzene etc.) If there are job tasks that have potential exposures to these chemicals, the following will be conducted.
- a) Exposure monitoring that is representative of employee exposures.
  - b) Recordkeeping: Maintain all exposure monitoring records.
2. If exposures exceed the OR-OSHA exposure limits, we will implement all required protective measures in compliance with the applicable OR-OSHA standard. This may include:
- a) Written Compliance Plan
  - b) Personal Protective Equipment
  - c) Engineering Controls
  - d) Medical Monitoring
  - e) Employee Training

## CHAPTER 6. CONTROL OF HAZARDOUS ENERGY – LOCKOUT TAGOUT

### A. Purpose

This Lockout/Tagout Program was established to provide the maximum protection to our employees whenever they must isolate machines or equipment from energy sources and to prevent unexpected energization, start-up or release of stored energy that could cause them injury. The primary method of hazardous energy control will be accomplished by utilization of this lockout/tagout program.

Employees involved in the maintenance, repair, and servicing of equipment that requires the by-passing of guards are required to follow this policy. Those involved will be instructed in the safety significance of the lockout procedures to follow.

1. Each operator and maintenance person will know all the energy sources within equipment, machinery or process. All sources of energy are covered under the procedures of this program, including electrical, mechanical, hydraulic, pneumatic, chemical and thermal energy.
2. Repair and service on cord and plug electrical equipment is required to have the electric cord pulled from the energy source prior to repair. If the plug remains under the exclusive control of the employee performing the servicing and there are no other sources of energy (mechanical, pneumatic, hydraulic, or stored energy), no additional lockout/tagout procedures are required.

Note: The key definitions used in this program and in the regulations are found below.

### B. Applicable Legal Standards

1. State: OAR 437 Division 2
2. Federal: 29 CFR 1910.147

### C. General Responsibilities

1. Direct Supervisor: The Direct Supervisor is responsible to see that the overall policy is developed and works with the Safety Committee, and employees to ensure implementation. They are also responsible to see that these are periodic audits and a review of the policy is done annually.
2. Authorized Employees: Only workers and supervisors who have received special training to recognize understand the particular hazards involved with the tasks to be performed and the type and magnitude of energy to be controlled are authorized to implement the LOCKOUT/TAGOUT procedure.

*It is the trained and authorized employee's responsibility to follow this program. Employees are to use their own lock and key (or individual lock at the lockout center). No other person shall be allowed access to your key or your lock. No one is allowed to remove your lock except the authorized person applying the lockout/tagout.*

3. Affected Employees:

- a) An affected employee is one whose job requires him/her to operate or use equipment on which servicing and maintenance is being performed under lockout/tagout, or whose job requires him/her to work in the immediate area in which such servicing and maintenance is being performed.
  - b) An affected employee's responsibility is to ensure that they do not attempt to operate any equipment being locked-out/tagged-out and follow all safety procedures in shut down and restarting equipment.
4. All Other Employees: Any other employees who may see lockout or tagout on equipment are to honor the locks and tags and make no attempt to start or remove the devices.
5. Training: A key component of this program is employee training. It is the supervisor's responsibility to see that all employees involved in this program are trained. The authorized employees are to receive additional specialized training as outlined in this program. The training must be documented by the Supervisor and/or the Supervisor.

**D. Equipment Identification**

Each piece of equipment or type of equipment with more than one source of energy has been identified along with the lockout issues. The equipment included in this program is located in our facilities at:

1. Public Works Shop
2. Water Pump Station
3. Jessie Mays Community Hall

See APPENDIX 2 for listing of machinery and equipment. The lockout procedures section of this program outlines the procedures by "like" pieces of equipment. The electrical disconnects are labeled and are all in near vicinity of the machinery.

**E. Basic Lockout/Tagout Procedures**

1. All equipment energy sources capable of being locked out during servicing, repair, or maintenance will be locked-out to prevent accidental or inadvertent operations which could cause injury.

Energy sources can include: electrical, pneumatic, hydraulic, stored energy: gravity, springs; thermal; fluid flow - pressure, all geothermal piping, and gasoline/diesel driven machines.

2. Equipment energy sources not capable of being locked out will be isolated and then tagged-out to inform all others of the safety procedure in use and warning that no operation of the equipment is permitted.
  - a) Example of some equipment not capable of being locked out includes: 110 circuit breakers, and older power panel installations.

- b) Tags will be used at these energy isolating devices. We will design systems capable of being locked-out if major replacement, repair, renovation or modifications are made on the electrical systems or equipment.
3. Typical conditions requiring lockout or tagout devices include:
- a) Anytime repairs, servicing and/or changes are being done on machines or equipment and the safeguards are by-passed, or work on electrical circuits in which the employee could come into contact with hazardous energy occurs (mechanical, pneumatic, hydraulic, or stored energy).
  - b) Whenever moving parts of machinery or equipment are being cleaned or oiled and accidental contact with movable parts is possible.
  - c) When it becomes necessary to remove a plug or to a clear blockage.
  - d) Mechanisms or pumps which expose the employee to potential release of hazardous energy.
  - e) When working on lines which contain hazardous substances, or high-pressure lines. Such systems should be clearly marked. Valves in the system should be capable of being locked out. In the case of high-pressure lines, there should be a means of safely relieving pressure in blocked sections.
  - f) To lockout power to equipment to prevent use by unauthorized persons and/or to prevent use in off hours.
4. **No employee shall attempt to operate any switch, valve, or other energy isolating device bearing a lockout or tagout device.**
5. Lock securing switch levers to prevent activation of electrical circuits or equipment on which work is being done. If it is not capable of being locked apply a tagout which is securely fastened to the disconnect lever or at the immediate area to warn of the on-going procedure.
6. Other basic controls that may be needed due to the type of energy present include:
- a) Hydraulic Energy - Close valve and bleed off line or block the device.
  - b) Air Pressure - Close valve and bleed off pressure from line prior to working on the device.
- Note: Some valves open when they lose pressure, which can cause hydraulic or other liquid flows that could be hazardous to employees. These valves must be isolated and controlled.
- c) Springs - Attach a hold down device or leave in open position where no stored energy is present.

- d) Fluid Flow - Water Pressure: Insure proper gate devices are used that hold the back pressure, or drain lines so no fluid pressures are present.
7. Additional Shutdown and Lockout Procedures are needed for specialized equipment and vehicles during maintenance. The procedures are also outlined in APPENDIX 1.
- a) Heavy Equipment and Vehicles during servicing - the mechanic will follow a normal shut down of the equipment. The equipment is all gasoline or diesel engine powered.
  - b) The heavy equipment will have a tagout placed on the steering wheel which indicates that the mechanic could be injured if the equipment was started.
  - c) Depending on the type of work being performed there may be various other sources of energy such as hydraulic and gravity that could dissipate during servicing. Additional control needs would include but not be limited to:
    - I. Dump Trucks or any type of hopper or hood that could fall - the dump bed or device will have the safety bars in place prior to any work around or under a lifted bed for support against gravitational pull due to the potential loss of hydraulic pressure.
    - II. Backhoes or other hydraulic operated boom devices - If the shovel or boom is raised then the safety bar or blocking devices will be in place if the employee is working under the device. If the shovel or boom devices are on the ground in an energy neutral position additional controls would not be necessary.
    - III. Mowers - The mower arm which is hydraulically controlled needs to be set on the ground prior to any work or use safety bars or other secure blocking devices if the head is worked on in an up position.

#### **F. LOCKOUT/TAGOUT HARDWARE (EQUIPMENT)**

- 1. Locks, tags and hasps will be used as energy isolating devices. Valves with handle and lock attachment hole will be locked out. If the locks become damaged in any way immediately seek a replacement lock.
- 2. Valves not capable of being locked-out will have tags placed on them with a slip lock plastic attachment device capable of withstanding 50 pounds of pressure.
- 3. The hardware is required to meet the following criteria:
  - a) Durable to withstand weather and all types of exposures.
  - b) Standardized by color, or shape, or size, or format.
  - c) Locks substantial so they cannot be removed without excessive force.
  - d) Singularly identifiable.

- e) Device used only for controlling energy and not used for other purposes.
  - f) Tags substantial to prevent inadvertent or accidental removal.
  - g) Tag attachment devices need to be non-reusable, attached by hand, self-locking, minimum unlocking strength of no less than 50 pounds.
  - h) Lockout/tagout devices - shall indicate identity of employee applying device.
  - i) Tag must have a written warning on it, i.e., **Do Not Start**.
4. Locks, tags, hasps, chains, and other restraining devices will be kept by each authorized employee. Extra locks and equipment will be kept at the supervisor's office. The supervisor will review the location of the lockout equipment and how to obtain additional lockout equipment as necessary.
5. Out of Service Tag - Employees may need to use an out of service tag when a piece of equipment is not functioning properly and it needs to be removed from service for the protection of the equipment.

**THE OUT-OF-SERVICE TAG IS NOT TO BE USED FOR LOCKOUT/TAGOUT HAZARDOUS ENERGY CONTROL.**

**REMEMBER** once work begins on the equipment that places the employee in danger of hazardous energy release the authorized employee(s) must place their personal lock and tag on the energy isolating device.

6. The list of equipment, location, and lock out procedures are located in APPENDIX 2.

**G. SEQUENCE FOR A LOCKOUT OR TAGOUT PROCEDURE**

The lockout/tagout procedure must be conducted in the following manner. No deviations will be tolerated.

1. The **authorized** employee shall notify the affected employees that the lockout/tagout system is going to be utilized. In many cases no one's safety will be affected by maintenance and repair activities, thus there will not be any affected employees.
2. If a particular piece of equipment is operating, it must be shut down by the normal stopping procedure such as depressing the stop button or opening the switch. Some equipment have detailed procedures that need to be followed by trained employees.
3. The authorized person shall lock out and tag out the energy isolating device of the equipment or machines with their individual assigned lock or by using individually keyed locks. These devices are assigned to each maintenance employee as part of his/her tools. The locks in the lockout center are individually keyed and can be used by other authorized employees or for additional hardware if multiple disconnects must be locked out during maintenance.

4. The authorized employee must operate the switch, valve or other energy isolating device to make sure the equipment is isolated from its energy source. Stored energy, such as the energy found in springs, rotating fly wheels, hydraulic system or compressed air or gas lines must be dissipated or restrained by either repositioning, blocking or bleeding down.
5. After ensuring that no personnel are exposed, the authorized person shall complete another check to make sure that all of the energy sources have been disconnected. The type of verification testing will depend on the type of equipment or electrical installation. Equipment may be tested by trying to operate it by turning on the controls.

**CAUTION: Return operating controls to neutral or off position after test.**

6. Most of the electrical disconnects operating various pieces of equipment can be locked out; however, if other equipment energy requiring control cannot be locked out then a tagout device will be used. The tagout device must be attached on or as close as possible to the energy isolating device. The tag must clearly indicate that the operation or start-up of the energy isolating device from the safe or off position is prohibited.

## **H. EQUIPMENT TESTING UNDER LOCKOUT/TAGOUT**

At times, some of our equipment must be tested or positioned while doing maintenance or repair. The following procedure must be followed under those conditions:

1. Clear the machine or equipment of all tools and materials that are non-essential items.
2. Make sure that all of the employees are clear of the machine or equipment and notify them that the machine will be energized.
3. The authorized employee shall remove the lock.
4. Energize and proceed with the testing or positioning.
5. De-energize all systems and complete the shut down procedures before continuing any maintenance or service.

## **I. RESTORING EQUIPMENT TO NORMAL OPERATIONAL STATUS**

When the authorized employee has completed their work, then the lockout device and tag can be removed. The following procedure will be followed during that process:

1. The authorized person shall inspect the work area to make sure that all of their tools have been removed from the machine and ensure that the machine or equipment components are operationally intact.
2. Check the work area to ensure that all employees have been safely positioned or removed.
3. Notify all of the affected employees that the equipment is to be restarted.

4. Remove Lockout and Tagout device.

**Note: The authorized employee is the only person who shall remove the lockout or tagout device. The only exception to this is under the following conditions.**

#### **J. REMOVAL BY SOMEONE OTHER THAN THE PERSON THAT APPLIED THE LOCK**

Removal of a safety lockout or tagout device by any other person than the authorized employee who applied it may only be done under the direction of the supervisor, or in his or her absence, by a lead worker or department manager, under the following procedure.

1. The supervisor will verify that the authorized employee who applied the device is not at the facility by checking with the immediate supervisor and/or co-workers.
2. The supervisor will call the authorized employee at home if possible to inform him/her that his/her lockout and/or tagout device needs to be removed. If the employee cannot return to remove the lock then the supervisor will inform the person that the lock is being removed. The supervisor or lead person may then use a master key or second key that is kept in a locked, inaccessible location known only to the supervisor or lead person and remove the lockout device.
3. The supervisor must follow all the correct protocols for removal of a lockout or tagout as outlined above and safely place the equipment back in service and then notify affected employees.
4. If all reasonable efforts have been made to contact the authorized employee, but the person was not reachable, the supervisor will ensure that the authorized employee upon return to work will know that his/her lock was removed and that routine operation of the equipment is now occurring.

#### **K. PROCEDURE INVOLVING MORE THAN ONE PERSON**

If more than one employee is required to lockout or tagout equipment, each shall place his/her own personal lockout device or tagout device on the energy isolating device(s). When an energy isolation device cannot accept multiple locks or tags, a multiple lockout or tagout device (hasp) is to be used.

#### **L. SHIFT OR PERSONNEL CHANGES**

During shift or personnel changes the hazardous energy control responsibility will be transferred in a manner that maintains uninterrupted protection for the employees involved.

1. All employees in the immediate affected work area shall be informed of the transfer of lockout/tagout devices between the off-going and on-coming employees.
2. On-coming employees must verify the equipment has been de-energized and proper procedures have been followed.

3. The on-coming authorized employee shall apply his/her own lockout/tagout device to the energy control source prior to the removal of the lockout/tagout device by the off-going employee.
4. The on-coming authorized employee shall ensure that no personnel are exposed, and as a check that all energy sources are disconnected, operate the push button or other normal operating controls to make certain the equipment will not operate. Return operating control(s) to the “off” position after the test.

## **M. CONTRACTORS**

1. When hiring outside contractors to come into our facility to work on machines and equipment, their activities may create hazards which normally are not present to regular employees.
2. A copy of our procedures will be given to that contractor and a mutually agreed upon procedure established concerning the lockout/tagout devices that will be used to protect our employees and the contractor's workers. This coordination will help to ensure that all employees know what kind of work is to be performed, where and when it is to be performed, and how they are being protected.
3. The Contract Project Manager will identify the energy isolating devices for the contractor. The contractor's employees will be responsible to lockout all devices capable of locking or place an energy control tag on or as near the device as possible.

## **N. PERIODIC INSPECTION**

Periodic inspections are intended to assure that the energy control procedures continue to be implemented properly, and that the employees involved are familiar with their responsibilities. OR-OSHA requires that an inspection type audit of lockout procedure must be done AT LEAST ANNUALLY.

1. The supervisor will conduct periodic inspections of the Lockout/Tagout Program procedures at least annually to ensure that this procedure and the requirements of OR-OSHA rules are being followed.
2. The periodic inspection will be performed by an authorized employee not involved in the energy control procedure being inspected. The inspector must determine three issues:
  - a) Whether the steps in the energy control procedure are being followed.
  - b) Whether the employees involved know their responsibilities under the procedure.
  - c) Whether the procedure is adequate to provide necessary protection and what changes, if any, are needed.
3. The inspector will observe and talk with the employees in order to make these determinations. These inspections are intended to provide immediate feedback and action to correct any inadequacies observed.

4. Written records shall be made of these inspections and the findings of these inspections will be kept by the Department Supervisor. See forms for the *Audit Inspection Form*.

**O. EMPLOYEE TRAINING**

1. Retraining will be conducted whenever a periodic inspection reveals, or whenever there is reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures. The retraining will re-establish employee proficiency and introduce new or revised control methods and procedures as necessary.
2. Annual training review of this program by all affected and authorized employees is recommended.

**P. DOCUMENTATION OF TRAINING**

1. The supervisor will document that employee training has been accomplished and is being kept up-to-date. The certification shall be an individual certificate of training for each employee receiving the training.
2. The certificate includes each employee's name, job title, signature line for the employee and training date, signature line for the supervisor or qualified person conducting the training, their job position and date.
3. This documentation shall be filed in the employee's training file.

## APPENDIX 1 LOCKOUT/TAGOUT DEFINITIONS

**Affected Employee** - An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed. The affected employee's safety may be affected by the de-energization of the equipment. An example would be in a maintenance shop when the air compressor will be shut down for maintenance and repair and the garage repair personnel have a vehicle on the hydraulic hoist. The lack of air pressure could cause the hoist to lower without notice. In this case, the garage staff would be affected employees.

**Authorized Employee** - A person who locks or implements a tagout system procedure on machines or equipment to perform the servicing or maintenance on that machine or equipment. An authorized employee and an affected employee may be the same person when the affected employee's duties also include performing maintenance or service on a machine or equipment which must be locked or a tagout system implemented.

**"Capable of Being Locked Out"** - An energy isolating device will be considered to be capable of being locked out either if it is designed with a hasp or other attachment or integral part to which, or through which, a lock can be affixed, or if it has a locking mechanism built into it. Other energy isolating devices will also be considered to be capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

**Energy Isolating Device** - A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a slide gate; a slip blind; a line valve; a block; and any similar device used to block or isolate energy. The term does not include a push button, selector switch, and other control circuit type devices.

**Energy Source** - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

**Lockout Device** - A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.

**Out-of-Service Device** - This is a tag that is placed on equipment controls or at the main disconnect to notify other personnel that the equipment or process is taken out of service because it is not functioning properly or equipment damage may occur or personnel does not want the equipment on-line for process reasons. It is never to be used as an energy control tagout.

The tag states:

- **CAUTION**
- **Reason why equipment is out of service**
- **Signed by:**

- **Date:**

**Tagout device** - A warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

THIS TAG STATES:

- **DANGER DO NOT OPERATE**
- **SIGNED** \_\_\_\_\_
- **DATE** \_\_\_\_\_
- **DO NOT REMOVE THIS TAG**

## APPENDIX 2: TYPE OF EQUIPMENT REQUIRING LOCKOUT/TAGOUT FOR CONTROL OF HAZARDOUS ENERGY

The following is an inventory of the equipment included in this lockout program with the specific lockout procedures.

EQUIPMENT / CONTROLS	BASIC HAZARD
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### 1. All Electrical Equipment which is hard wired with an electrical disconnect (and disconnect is labeled).

- a) **Generator at Water Pump House**
- b) Shut down procedures
  - 1.The appropriate breaker is switched off
  - 2. Wait for motor to come to a complete stop
  - 3.Install Lock out tag out tag
- c) Start up procedures
  - 1.check area prepare for start up
  - 2.Inform lock out to be removed
  - 3.Start motor

### 2. All Hydraulic Equipment

- a) **Backhoe, Public Works**
- b) Shut down procedures
  - 1.Turn off equipment
  - 2.Release stored energy
  - 3.Lock out
- c) Start up procedures
  - 1.Remove tools
  - 2.Inform lock out to be removed
  - 3.Restore energy

### 3. All Pneumatic Equipment

- a) **Various Public Works machinery at Shop and Water Tank Site**
- b) Shut down procedures
  - 1. Turn off equipment
  - 2. Release stored energy
  - 3. Lock out
- c) Start up procedures

1. Remove tools
2. Inform lock out to be removed
3. Restore energy

**4. All chemical lines:** The City does not maintain chemical line.

**5. Heat producing equipment**

- a) HVAC @ City Hall & Library
- b) Shut down procedures
  1. Turn off equipment
  2. Release stored energy
  3. Lock out
- c) Start up procedures
  1. Remove tools
  2. Inform workers
  3. restore energy

## CHAPTER 7. NOISE EXPOSURE AND HEARING CONSERVATION

### A. Purpose

The City of North Plains has adopted this Noise and Hearing Conservation Policy and Procedures to protect our employees from hearing loss and ensure compliance with the OSHA Noise regulations. The regulations require that each employer implement a hearing conservation program if employee's noise exposure levels exceed 85 decibels for an average of 8 hours.

The primary affected employees are our maintenance staff who occasionally work with loud equipment or in areas of possible high noise.

Law enforcement departments will also have noise exposure at the shooting range which, in most cases, will qualify them to fall under this policy.

Current noise survey reports are contained in this chapter of the Safety Manual and are used to ensure that noise exposed employees are part of the hearing conservation program.

### B. Applicable Legal Standard

1. Federal: 29 CFR 1910.95
2. State: OAR 437 Division 2

### C. Definitions

**Permissible Noise Exposure** - There are two exposure levels that if exceeded require specific compliance activities.

1. **Permissible Noise Exposure** - Eight hour time-weighted average level of 90 decibels on the A scale or a dose of 100%.
2. **Action Level** - An eight hour time-weighted average of 85 decibels on the A scale or a dose of 50%.

**Representative Noise Exposure** - Measurements of an employee's noise dose or 8 hour time-weighted average sound level that the employer deems to be representative of the exposures of other employees in the workplace.

1. Sound measurements as taken by: Mike Schoelich March 2008 Db meter *(Name of person conducting the survey, date of survey, type of instrument)*
  - a) **Noise Dosimeter** – An instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a noise dose.
  - b) **Sound Level Meter** – An instrument for the measurement of sound level.

**Time-weighted average sound level** - A sound level, which if constant over an 8-hour exposure, would result in the same noise dose as is measured.

## D. General Responsibilities

1. Management: It is the responsibility of Management to see that noise controls are implemented and maintained and that all employees at noise exposures in excess of 85 dBA time-weighted average are part of an effective hearing conservation program.
  - a) This includes auditing the on-going program and training employees in the hazards of noise and required controls.
2. Supervisor: It is the responsibility of the supervisor to assure that representative noise surveys are conducted. The supervisor also maintains records of employee training and audits the overall program. In addition, he/she is responsible for the following tasks:
  - a) Overseeing the program and ensuring that employees are following the OR-OSHA standards and that employees' hearing is being protected.
  - b) Assuring that employee medical records and all past employee records per the OR-OSHA standard are maintained by the Administration or HR.
  - c) Assuring that their employees wear hearing protection, have annual hearing tests and are part of the annual noise training or hearing consultation.
3. All Noise Exposed Employees: All noise exposed employees are responsible for wearing appropriate hearing protection, taking an active part in the annual training and getting annual hearing tests.

## E. Procedures

### Noise Surveys

1. Noise surveys are required to be done on work operations that have potentially high noise levels (85 dBA and above).
  - a) The noise measurements will be included in the Safety Manual.
2. Additional noise surveys are required to be taken when additional equipment is purchased or processes which could result in higher noise levels, and periodically to re-verify the test results.
3. Assistance with noise monitoring can be obtained from our insurance carrier, OR-OSHA Consultants, or through outside consultants.
  - a) The noise survey measurements are recorded on the employees hearing test records.
4. Each employee exposed to noise at or above the 85 dBA average is to be informed of the results. This will be done by posting the data and including the information at the employee initial and annual employee noise training classes.

## **F. Hearing Protection**

1. Hearing protection is required to be worn during the operation of equipment or processes that exceed 85 dBA noise levels as a time weighted average exposure.
  - a) The hearing protection (ear barrier plugs, muffs, and foam plugs) is available in the Public Works shop. The use and availability of the hearing protection will be pointed out to each new employee during their initial safety orientation.
  - b) EMPLOYEES REQUIRED TO WEAR HEARING PROTECTION WILL BE INFORMED BY THEIR SUPERVISOR.
2. Employees will be trained on how to properly fit the hearing protectors by their supervisor or with assistance from outside safety/health consultants. If anyone has problems with the devices please contact your supervisor.
3. Employees will be provided with at least two styles of protection, plugs or muffs, to try on determining which device would be best for them. All the devices provided will be evaluated to determine that if they provide adequate noise attenuation for the noise exposure levels.
  - a) Each employee will be responsible for the maintenance of his/her assigned hearing protective devices.
  - b) Disposable plugs will be discarded at end of shift or when they become excessively soiled.
  - c) Inserts or barriers will be checked prior to each use for any defects. If barriers are used the head band needs to be checked to ensure that it is tight and the insert is not torn, disfigured or does not properly seal. New devices will be obtained and used.
  - d) Follow manufacturer's recommendations on maintenance.

## **G. Audiometric (Hearing) Testing**

1. New employees assigned to a noise area (where the time weighted exposure to noise is above 85 dBA) will be given a baseline hearing test and then will be tested annually thereafter. The tests require that the employee not be in an occupational noise area for 14 hours prior to the test. This test will be the reference for further tests to determine if hearing levels change. The hearing test will be given by contract certified audiometric technicians. Hearing tests showing a significant hearing loss are forwarded to the contract professional reviewer.
  - a) Baseline or initial tests may be given to new employees at the time of hire even if they are not working in a noise area.
2. Significant threshold shift (STS) criterion: The hearing loss criterion is a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 hertz (Hz) in either ear.

- a) The employee may be re-tested within 30 days and consider the results of the re-test to determine if a permanent shift has occurred.
  - b) Employees will be informed if their tests show significant changes in their hearing levels based on OR-OSHA standards by written letter and follow-up by the employee's supervisor once notified of that change by our contract audiologists.
  - c) In all cases of hearing loss the employee will be re-instructed on how to properly wear hearing protection. The supervisor will follow-up on all hearing tests that show a reduction in the employees hearing from the baseline. (See forms)
3. Contract audiologists will determine if additional tests are needed and the status of the employee's hearing.

#### **H. Employee Training**

1. New employees will receive Hearing Conservation Training at initial assignment to a noise area. The training will be repeated annually for all noise exposed employees. The specific training materials are provided in this manual and are to be a guideline for supervisors and/or Safety Committee representatives to use.
2. A copy of the training materials will be available to our employees by contacting his/her supervisor or Safety Committee member.
3. A copy of the OR-OSHA Noise & Hearing Conservation Rules will be posted on the safety bulletin at each of our locations where employees are potentially exposed to hazardous noise levels.

#### **I. Noise Engineering Controls**

1. The supervisor is responsible to determine if there are feasible engineering controls that could reduce noise levels to below 90 dBA as a time-weighted 8 hour average.
2. **Engineering Control Feasibility Studies:** In some cases there may be records of noise control studies done on pieces of equipment or processes. These records should be kept to show compliance with OR-OSHA noise engineering control standard. The records should be maintained for the duration the equipment or process is in use.

#### **J. Recordkeeping**

Records must be maintained for the various elements of the program. This includes the following requirements:

1. Noise Exposure Measurement:
  - a) Time Frame: Current plus 2 years of results (note: the current record may represent measurements taken longer than 2 years ago. This is permitted as long as the readings are reflective of noise exposure levels).

2. Audiogram records:

- a) Time Frame: Duration of employment plus 5 years

3. Training Record

- a) Time Frame: There is no time frame given in the rules but it is the policy to keep the training records for each employee for the duration of employment and then forward all records to HR.

4. OSHA 300 Log Record

- a) Hearing loss is recorded on the OSHA 300 Log when an annual audiogram reveals a Standard Threshold Shift (STS) in either or both ears and the hearing level in the same ear is 25 decibels (dBA) above audiometric zero.
- b) Employee must be informed in writing within 21 days of the determination of permanent hearing shift.
- c) Record Keeper: The City Manager is assigned responsibility for OSHA 300 Injury and Illness Log.

**K. Sound Level Measurements**

The following pieces of equipment were measured and found to produce high levels of noise:

<b>EQUIPMENT</b>	<b>SOUND LEVEL</b>	<b>ALLOWABLE TIME OF EXPOSURE</b>	<b>DATE MEASUREMENTS WERE TAKEN</b>
<b>Back pack blower</b>	<b>98-103db</b>	<b>1 1/2Hr</b>	<b>March 2008</b>
<b>Weedeater</b>	<b>98-103db</b>	<b>1 1/2hr</b>	<b>March 2008</b>
<b>Backhoe</b>	<b>90db</b>	<b>8 hr</b>	<b>March 2008</b>
<b>Plate compactor</b>	<b>90-99db</b>	<b>2hr</b>	<b>March 2008</b>
<b>5KW Gen</b>	<b>95 db</b>	<b>4hr</b>	<b>March 2008</b>

## **CHAPTER 8. PERSONAL PROTECTIVE EQUIPMENT**

### **A. Purpose**

The City of North Plains adopted this Personal Protective Equipment (PPE) policy and procedures to ensure that when hazards cannot be fully controlled with engineering or process controls that employees use appropriate personal protection. This chapter is also to assist in ensuring compliance with OR-OSHA standards.

1. Our policy includes appropriate training on use and maintenance of PPE be provided by or arranged for by the supervisor. Employees are required to wear proper personal protective equipment.
2. The PPE provided shall be used as outlined by specific job procedures and maintained in a sanitary and reliable condition.
3. If employees provide their own protective equipment it is still our responsibility to assure its adequacy, including proper maintenance and sanitation of the equipment.

**The selection of PPE shall be made by our management staff and it shall be designed to match the hazard and allow for employees to safely conduct their job tasks.**

1. The PPE is designed to protect the worker from injury or harm. However, it is not designed to prevent the occurrence of an incident which might cause harm or injury, AND as a result, it is our policy to ensure that working conditions are safe and PPE is used as a back-up for additional protection.

### **B. Applicable Legal Standard**

1. State: OAR 437 - 002 - 1910.132 -140 "Personal Protective Equipment"

### **C. Definitions**

**Personal Protective Equipment** - Equipment worn by the employee to prevent injury or occupational illness wherever hazards from processes or equipment cannot be contained or eliminated at their source.

**Mandatory Respirator Use (based on OR-OSHA standards)** - Respirators are required to be provided and worn when it is necessary to protect the health of an employee due to overexposure to air contaminates.

**National Institute of Occupational Safety and Health (NIOSH) Approved Respirators** - NIOSH has established specific respirator approval standards that manufacturers must meet. Employers must select only NIOSH approved respirators based on the type of contaminant hazard.

### **D. Chapter Format**

This chapter reviews basic requirements for personal protective equipment including:

- a. Head protection
- b. Hearing and ear protection
- c. Eye and face protection
- d. Hand protection
- e. Foot protection
- f. Fall protection

Written certificates outlining work operations/jobs that require specific PPE are provided in the forms section. The certificate also provides basic description of the types of PPE that must be selected.

## **E. General Responsibilities**

1. Management: It is the responsibility of entity management to ensure that PPE evaluations have been completed for jobs/tasks that would potentially require or have hazards that require PPE. Additionally, management must assure that proper PPE is made available in types and sizes as to fit employees.
2. Supervisor: It is the responsibility of the supervisor to see that employees are trained in the use of personal protective equipment and are instructed on what is required for their work duties. Supervisors are responsible to complete and/or update the PPE written certificates which can be found in the forms section. Direct supervisors will be responsible to assure all PPE is worn when the PPE Assessment indicates that PPE is necessary.
3. All Employees: Employees must follow all safety procedures as outlined in this chapter by OR-OSHA rules and manufacturer's recommendations in regards to personal protective equipment. Employees are required to inspect their equipment daily/prior to use and ensure that the equipment is functional. Any problems with the equipment shall be reported to the supervisor.
4. Safety Committee: The Safety Committee will include review of personal protective equipment in their quarterly inspection activities.

## **F. Procedures**

1. Head Protection:
  - a) Hard hats are to be used to protect the head from flying objects, impact, and electrical shock. Hard hats used at our work operations will meet ANSI standards for the job task.
  - b) Hard hats shall be used in the following jobs:

- I. While working around construction or maintenance field projects or equipment.
  - II. While working outside and around heavy equipment.
  - III. Working inside a confined space below ground.
  - IV. In addition, hard hats shall be used by all employees when overhead hazards are present. This includes when working under floor openings or walkways, in areas with low ceilings, or in areas with protruding objects.
2. Hearing Protection: (See Chapter 7 for overall instruction about hearing conservation and protection)
- a) Earmuffs and earplugs are used to protect against hazardous noise levels when noise exposure levels cannot be adequately controlled by various engineering controls.
  - b) Hearing protective devices are located at:
    - I. Public Works shop
    - II. Police vehicles
    - III. Public Works vehicles
  - c) If earmuffs are worn, the temple bars of glasses will interfere with the seal of the ear piece. As a result, ear plugs should be worn by those required to wear safety glasses or glasses with corrective lenses.
3. Eye & Face Protection:
- a) Eye and face protection is to be worn where there is a reasonable probability of injury to the eyes and face from flying objects, glare, harmful liquids, or injurious light, such as arc welding flash.
  - b) Eye protection needs to meet the following criteria:
    - I. Provide adequate protection against the particular hazards for which they are designed.
    - II. Provide reasonable comfort and shall not unduly interfere with the movements of the wearer.
    - III. Be durable.
    - IV. Be capable of being cleaned easily.
    - V. Be stored in clean containers or packaging and kept in good repair.
  - c) The specific type of eye and face protection needed depends on the type of hazard.

- I. Particle hazards from grinding/chipping require safety glasses with side shields.
- II. Face protection is worn when liquid splashes or significant particle matter could impact the face and cause injury
- III. Liquid splash hazards require chemical splash goggles or safety glasses with a face shield.
- IV. Gas welding requires welding goggles.

d) Safety glasses must be worn when an eye hazard exists.

#### 4. Hand Protection:

- a) Hand protection is worn to protect the hands from sharp wood/thorns, poison oak, and mechanical injury due to friction, heat, shearing/cutting actions, and for protection against chemicals.
- b) Chemical protective gloves are selected based on the type of rubber/plastic material which affords proper protection against specific chemical used. The selection will be made by the supervisor.
- c) Chemical protective gloves will be worn when there is skin contact with the following chemicals:
  - I. Solvents contact
  - II. Skin contact with any corrosives
  - III. Chemical spill clean-up
- d) Mechanical protective gloves will be worn when employees are exposed to wood splinters, friction, sharp metal edges, hot or cold materials, and moving heavy objects. Gloves will be available by job task or in the use areas.

#### 5. Foot Protection:

- a) Special foot protection is necessary when there is a potential for foot injury, or slipping, or when the feet may become wet due to the work environment. Your supervisor will work with employees who may have job assignments regarding special footwear.
- b) The following footwear is expected to be worn:
  - I. Leather work boot when working on or around equipment. Safety steel toes when there is a hazard from dropping heavy objects.
  - II. Rubber boots when exposed to wet conditions.

- c) The shoe policy will be periodically reviewed by the Safety Committee to ensure that appropriate footwear is used preventing foot injuries.

## 6. Fall Protection - PERSONAL PROTECTIVE EQUIPMENT

- a) When it is not feasible to use physical barriers to protect employees from falls, personal protective equipment (PPE) shall be used.
- b) PPE shall be chosen based on the following:
  - I. Distance of potential fall.
  - II. Impact on the body from the PPE during a sudden stop.
  - III. Intended use of PPE (stopping fall as opposed to retrieval from a confined space - see Chapter 5 Confined Spaces).
  - IV. Fall arresting forces on the body.
- c) Type II chest harnesses shall be worn for rescue purposes only and in no case are used to stop a vertical fall.
- d) When a worker(s) enters a confined space, a helper wearing the same PPE shall be stationed at the entrance to the confined space and shall monitor those inside for the duration of the project (see Chapter 4).
  - I. Personal retrieval systems for rescue from below-ground level tanks or confined spaces.
  - II. Authorized personnel shall ensure the use of a lifeline attached to a manual or power operated winch with steel cable retracting lifeline. Alternatively, a block and tackle or ratchet winch can provide the lifting mechanism with limited human effort after the victim has been hooked up, provided a lock or overspeed mechanism is incorporated. An anchorage point, such as that provided by a seven or ten-foot tripod should be available before work is commenced.
  - III. Full body harnesses, yokes, and wristlets shall be used when retrieval is through narrow openings.

## 7. Strength Requirements

- a) All components of the fall protection shall meet the strength requirements of American National Standard A10.14-1991.

Note: These strength requirements are based on one worker use. If multiple workers are tied off to a single lifeline, the strength requirement must be increased by the number of workers affected (i.e., two workers, one lifeline, minimum breaking strength must be 10,800 pounds at the center of line; three

workers, one lifeline, minimum breaking strength must be 16,200 pounds, and so forth).

- b) When tied off while working on suspended scaffolding, each worker must use a separate line which is not connected to the scaffold.
  - c) Hardware for body belts/harnesses and lanyards must be drop-forged, corrosion resistant with smooth edges, a minimum of 5,000 pound breaking strength without cracks or breaks.
  - d) Knots shall not be used in components of a fall protection system since a knot will reduce the strength by at least 50%.
  - e) Lanyards shall be kept as short as possible and in no case shall they exceed six feet to minimize the possibility for any length of a free fall.
  - f) Wire rope or rope-covered wire lanyards shall not be used where impact loads are anticipated or where there is an electrical hazard.
  - g) Belts and lanyards that have been subjected to impact loading shall be removed from service and destroyed or returned to the manufacturer for recertification.
  - h) Rope lanyards shall not be stored in work pouches where they may be subject to deterioration.
  - i) Where there is exposure to abrasion, spun nylon rather than filament nylon shall be used.
  - j) Only safety belts/harnesses with locking snaps shall be used to prevent "rollout" or disengagement. All hardware shall be compatible with the locking snap.
  - k) Only shock-absorbing lanyards shall be used to reduce the fall arresting impact on the wearer.
  - l) Tongue-type buckles shall be used in lieu of friction buckles since friction buckles may lose the ability to stop detachment if contaminated with grease or oil.
8. Inspection and recordkeeping
- a) The user shall inspect the fall protection prior to each use.
  - b) A trained and competent person shall inspect all components of protection device at least once each six month. The dates of this biannual inspection shall be recorded on a permanent tag attached to the harness.
  - c) Every five years, the fall protection system shall be returned to the manufacturer for recertification.

- d) Any defective body belt/harness or lifeline shall be destroyed or returned to the manufacturer before use.
- e) Any unit subjected to impact loading shall be immediately removed from service and destroyed or sent to the manufacturer for recertification.

#### 9. Road Worksite Protection

- a) Traffic Coning - Flagging must meet Manual on Uniform Traffic Control Devices (MUTCD's) specifications. Maintaining a safe work area in street operations requires attention to coning and flagging. There are three parts to this operation that must be considered:
  - I. Low-level warning (red head cones)
  - II. High-level warning when needed for heavy traffic flow (mast barriers)
  - III. "Feather off" the traffic flow around work projects.

Coning operation must be adjusted to fit each varied condition faced to take full advantage of traffic conditions and terrain but the following minimum guide is recommended:

- I. In a 20 MPH area - Red Head Cone 40 feet
- II. In a 30 MPH area - Red Head Cone 80 feet
- III. In a 40 MPH area - Red Head Cone 140 feet

Note: The above schedule is the absolute minimum standard for safety and should be extended wherever conditions permit. Slow or stopped equipment in traffic lanes must be flagged.

- d) Flagging (or Paddle): For the Flagger: Effective flagging is a critical part of any maintenance job that involves vehicular traffic. A good flagger uses assertive motions to control traffic. Supervisors and lead workers shall assure that all members of maintenance/construction crews are well versed in appropriate flagging techniques. All staff will have attended flagging school prior to the assignment.

## **Chapter 9. RESPIRATORY PROTECTION PROGRAM**

### **A. Statement**

Employees of the City of North Plains are not allowed to enter confined spaces requiring the use of respirators. The City's confined spaces are to be entered only after confined space procedures to ensure they are entering a non-permit space are followed.

In the event rescue is required from a confined space, Washington County Fire Department will be notified by calling 9-1-1.

## **CHAPTER 10. CHEMICAL HYGIENE POLICY AND PROCEDURES**

### **A. Statement**

The City of North Plains does not operate a laboratory. All regulatory testing is contracted to certified laboratories.

Maintenance staff occasionally performs non-regulatory tests in the field to address water quality issues.

### **B. Procedure**

When working with field testing kits employees must abide by these general safety rules:

1. Know the safety rules and procedures that apply to the work being. Determine the potential hazards (i.e., physical, chemical, biological) and appropriate precautions before beginning any new operation (see MSDS).
2. Know the location of and how to use the emergency equipment in your area, as well as how to obtain additional help in an emergency, and be familiar with emergency procedures.
3. Know the types of protective equipment available and use the proper type for each job.
4. Be alert to unsafe conditions and actions and call attention to them so that corrections can be made as soon as possible.
5. Do not consume food or beverages or smoke in areas where chemicals are being used or stored.
6. Avoid hazards to the environment by following accepted waste disposal procedures.
7. Be certain all chemicals are correctly and clearly labeled.
8. Use equipment only for its designated purposes.
9. Position and clamp reaction apparatus thoughtfully in order to permit manipulation without the need to move the apparatus until the entire reaction is completed. Combine reagents in appropriate order, and avoid adding solids to hot liquids.
10. Think, act, and encourage safety until it becomes a habit!
11. Wear appropriate eye and face protection at all times.
12. Use protective apparel, including face shields, gloves and other special clothing or footwear as needed.
13. Do not use mouth suction to pipet chemicals or to start a siphon; a pipet bulb or an aspirator should be used to provide a vacuum.

14. Avoid exposure to gases, vapors, and aerosols. Use appropriate safety equipment whenever such exposure is likely.
15. Work areas shall be kept clean and free from obstructions. Clean-up should follow the completion of any operation or at the end of each day.
16. Waste should be deposited in appropriate receptacles.
17. Spilled chemicals should be cleaned up immediately and disposed of properly.
18. Unlabeled containers and chemical waste should be disposed of promptly. Other materials or chemicals no longer needed should not accumulate in the shop or vehicles.
19. Equipment and chemicals should be stored properly; clutter should be minimized.

### **C. Chemical Procurement, Distribution, and Storage**

1. Prior to ordering any new chemical/substance, the MSDS should be reviewed for the following:
  - a) Potential hazards.
  - b) Safe handling procedures and methods.
  - c) Waste disposal procedures.
  - d) Proper personal protective equipment.

Note: This information can be obtained from the label, manufacturer's insert, or the MSDS.

2. No container of a chemical or substance shall be accepted unless an MSDS accompanies the received order.
  - a) Material Safety Data Sheet (MSDS) or satisfactory container label must be written in English and shall contain:
    - I. Chemical Identity
    - II. Manufacturer's Information
    - III. Hazardous Ingredients/Identity Information
    - IV. Physical/Chemical Characteristics
    - V. Fire and Explosion Hazard Data
    - VI. Reactivity Data

VII. Health and Hazard Data

VIII. Precautions of Safe Handling and Use

IX. Control Measures

X. Primary Routs of Entry (Inhalation, Absorption, etc)

XI. Emergency and First Aid Procedures

3. If chemicals have been stored beyond their appropriate shelf life or have deteriorated, they shall be properly disposed of immediately.

#### **D. Procedures for Storing Chemicals**

1. Annual audits shall be conducted for the purpose of inspecting:
  - a) Chemicals stored beyond their appropriate shelf life or have deteriorated.
  - b) Containers that have defaced or questionable labels.
  - c) Containers that are leaking or have corroded caps.
  - d) Containers that have developed any other problems and should be disposed of in a safe manner.

Note: A first-in, first-out system of stock keeping/chemical use should be instituted.

#### **E. Maintenance**

1. All eye washes and safety showers shall be checked periodically for adequate water flow and to insure cleanliness of the water.
2. Fire extinguishers shall be inspected monthly with date and initials on back of tag and annually to insure they are full and operating properly.

## **CHAPTER 11. ASBESTOS MAINTENANCE PROGRAM**

### **A. Statement**

The City of North Plains successfully abated asbestos at the Jessie Mays Community Center when a roof was replaced approximately 10 years ago.

City Hall, the Public Works Shop and the north Plains Public Library are not constructed with asbestos materials.

The municipal water system does not use asbestos pipes.

## **CHAPTER 12. LEAD COMPLIANCE PROGRAM**

### **Statement**

The City contracts for lead abatement work if it should be discovered in City facilities.

City Hall, Jessie Mays Community Hall, and North Plains Public Library have no known lead hazards, and these facilities have been painted/repainted after 1980.

The City of North Plains does not operate a shooting range.

## CHAPTER 13. ERGONOMICS PROGRAM

### A. Purpose

This chapter has been implemented with the goal of strengthening the City of North Plains commitment to occupational injury prevention. The goal of ergonomics is to eliminate or reduce worker exposure to hazards or work conditions which lead to musculoskeletal disorders which are injuries and disorders of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal discs.

### B. Applicable Legal Standards

1. State: ORS 654.010 - "Employers to furnish safe place of employment"
2. State: OR-OSHA Division 1 "Self-Insured requirements for ergonomic assessments and programs"

### C. Definitions

**Ergonomics** - The science that addresses human performance and well-being in relation to job, tools, equipment, and environment. Two additional terms that are commonly used in conjunction with ergonomics:

1. **Biomechanics** - The study of movement of body segments (fingers, hands, arms, back) to describe the abilities and limitations of the human body.
2. **Anthropometry** - The analysis of dimensions and proportions of the human body in relation to workstation design, equipment, furniture and tools.

**Musculoskeletal Disorders (MSD)** - Injuries and disorders of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal discs. They do not include injuries resulting from slips, trips, falls, or similar accidents. Examples of MSDs include carpal tunnel syndrome, tendonitis, and low back pain.

**Job Hazard Analysis** - A tool or process to make a job safe before hazards become accidents. This is done through the identification of hazards associated with a specific job and planned actions to control or eliminate the hazards. It provides a formal systematic method that when used consistently can provide the basic framework of a pro-active safety program.

**Hazard** - A potential danger which can result in injury or illness.

### D. Responsibilities

1. **Management**: It is the direct responsibility of Management to ensure that evaluations of workplace design, layout and operation, and assistance with job site modifications utilizing an ergonomic approach are conducted. The primary records of the ergonomic surveys and findings will be maintained by the supervisor or manager of the group or department receiving the evaluation.
2. **Safety Committee**: It is the responsibility of the Safety Committee to conduct basic ergonomic inspections.

## **E. Job Hazard Analysis and Control**

The following basic principles are to be used during review of workstations for ergonomic related problems. It is our policy to use a Job Hazard Analysis tool in the identification of ergonomic issues and solutions.

The job analysis is done to identify the “ergonomic risk factors” that result in MSD hazards. Recommendations on how to eliminate or reduce the hazards are made based on the extent feasible and may involve an incremental abatement process.

The following procedure will be followed when performing a Job Hazard Analysis:

1. Employees will be interviewed about whether performing the job poses physical difficulties and, if so, which physical work activities or conditions of the job they associate with the difficulties.
2. Employees will be observed performing the job to identify which physical work activities, workplace conditions and ergonomic risk factors are present.
3. Evaluate the ergonomic risk factors in the job to determine the MSD hazards associated with the covered MSD. As necessary, we will evaluate the duration, frequency and magnitude of employee exposure to the risk factors.
4. Identify, assess and implement feasible controls to eliminate or materially reduce the MSD hazards. This includes prioritizing the control of hazards.
5. Track progress in eliminating or materially reducing the MSD hazards. This includes consulting with employees in problem jobs about whether the implemented controls have eliminated or materially reduced the hazards.
6. Identify and evaluate MSD hazards when you change, design, or purchase equipment or processes in problem jobs.

### **Types of Controls**

1. Any combination of engineering, administrative and/or work practice controls can be used to eliminate or materially reduce MSD hazards.
2. Personal protective equipment may be used to supplement engineering, work practice and administrative controls, but may only be used alone where other controls are not feasible.

## **F. Training**

1. Persons involved with conducting ergonomic assessments will be trained on how to identify ergonomic risks, workplace design, layout and operation, and job site modifications utilizing an ergonomic approach.

## **CHAPTER 14. CRANES, DERRICK, AND HOIST OPERATIONS**

### **A. Purpose**

The City of North Plains uses small hoists in the maintenance of water system equipment. The Cranes, Derrick, and Hoist safety policy and procedures are designed to protect employees from potential hazards that can be created by the usage of cranes. This chapter will also help ensure compliance with the OR-OSHA standards.

It is important to note that this policy does not replace the need for the employees to fully understand the manufacturer's operating instruction.

### **B. Applicable Legal Standards**

1. Federal: 29 CFR 1910.179-181 "Cranes"
2. State: OAR 437- 002
3. State: OAR 437 Division 3 Subdivision N. "Construction Crane Standard"

### **C. Definitions**

**Authorized Employee (Designated personnel)** - Employees who have been designated by management to operate a crane in their work area. They shall be trained and supervised in proper operation and trouble shooting.

**Crane** - A machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism an integral part of the machine. Cranes whether fixed or mobile are driven manually or by power.

**Derrick** - An apparatus consisting of a mast or equivalent member held at the head by guys or braces, with or without a boom, for use with a hoisting mechanism and ropes.

**Hoist motion** - The motion of a crane which raises and lowers a load.

**Preventive Maintenance** - The regularly required maintenance checks (required by OR-OSHA rules) and recommended manufacturer's preventive maintenance.

**Overhead crane** - A crane with a movable bridge carrying a moveable or fixed hoisting mechanism and traveling on an overhead fixed runway structure.

### **D. General Responsibilities**

Employees are not permitted to operate crane or derricks. Such work shall be contracted.

Employees trained in the use of hoists must follow the procedures below.

## E. Inspections

All hoists shall be thoroughly inspected annually by a competent person. Records of monthly and annual inspections and results shall be maintained by the supervisor. The individuals assigned the inspection duties need to be trained in what to check and how to determine the proper function of the hoist.

## F. Procedures

1. Cranes, derricks, and hoists shall be operated by authorized personnel only in accordance with the manufacturer's specifications and limitations. Any trainee learning to use lifting equipment must be under the direct supervision of an authorized operator.
2. The manufacturer's rated load capacity shall be conspicuously posted on all hoists.
3. Before hoisting work begins, consideration must be given to the fact that stress is greatly increased if the leg of a hoisting chain, cable, or rope is rigged at an angle of less than 90 degrees. Avoid angles of less than 45 degrees. Angles less than 30 degrees shall not be permitted.
4. The loads lifted shall not exceed the maximum capacity of the hoist and its lifting attachments. Side pull is prohibited. The load must be directly in line with the mast or boom.
5. No person shall ride a load or hook.
6. Two or more separately rigged loads shall not be hoisted at one time.
7. Deformed or defective hooks, rings, or other lifting equipment links shall not be used.
8. Hooks shall be taken out of service when any of the following conditions exist:
  - a) The hook has more than 10° twist from the plane of the unbent hook.
  - b) The hook has more than 15% in excess of normal throat opening.
  - c) The hook has any cracks.
9. Wire rope cables that appear to be cut, frayed, kinked, or rusted shall not be used.
10. Wire rope shall receive emphasis during daily, monthly and annual inspections. Wire rope shall be taken out of service when any one of the following conditions exist:
  - a) In running ropes, 6 randomly distributed broken wires in 1 lay or 3 wires broken in 1 strand in 1 lay.
  - b) Wear of 1/3 the original diameter of outside individual ropes. Kinking, crushing, bird-caging, or other damage resulting in distortion of the ropes structure.
  - c) Evidence of any heat damage from any cause.

- d) Reduction from nominal diameter of more than 1/64" from diameters up to and including 5/16"; 1/32" for diameters 3/8" to and including 1/2"; 3/64" for diameters 9/16" and including 3/4"; 1/16" for diameters 7/8" to 1-1/8" inclusive; 3/32" for diameters 1-1/4" to 1-1/2" inclusive.
11. Standing ropes will be taken out of service if any of the following conditions exist:
    - a) More than 2 broken wires in 1 lay in sections beyond end connections.
    - b) Any rigging rope has 1 or more broken wires near an attached fitting.
    - c) Corroded, damaged or improperly applied end connections.
  12. Knots shall not be used to shorten nylon or wire rope slings.
  13. Chain links of a hoist shall not be secured by a nut and bolt, nails, pins or other means not recommended by the manufacturer.
  14. Chain slings lifting equipment should not be subjected to sudden shock by twisting, snapping or jerking into place.
  15. The working line of the hoist shall not be wrapped around the load.
  16. Rope clips shall be installed and used according to the safety codes. When used for eye splices, the U-bolt shall be applied so that the "U" section is in contact with the dead end of the rope.
  17. Before a load is lifted, it shall be inspected for loose parts or objects.
  18. The safety latch on the hook of a hoist shall be secured in every instance when lifting or moving a load.
  19. The operator shall see that the load is secure and properly balanced before it is lifted more than a few inches off the ground, floor, or support.
  20. The operator shall test the brake each time a load is lifted by raising the load a few inches and applying the brake.
  21. Care shall be taken to see that the equipment with which the load is lifted is not kinked or caught against obstructions while moving the load upward and that the load does not hit any obstructions.
  22. Lifting equipment must not drag under a load.
  23. The operator must refrain from getting between the load and a solid surface, to avoid being pinned or caught by a falling or moving load.
  24. Do not grab the cable as it is being pulled through the sheave wheels.

25. Employees must stand clear of all suspended loads.
26. Suspended loads shall not be left unattended.
27. When lowering a load, the operator shall proceed carefully, making sure that he/she has it under safe control at all times.
28. Lifting hooks and fastenings shall not be removed until material is at rest in a stable position or safely secured by other fastenings.

## CRANE OPERATOR INSPECTION CHECKLIST FIXED FACILITIES CRANES

Crane: \_\_\_\_\_ Date: \_\_\_\_\_

Operator: \_\_\_\_\_

Daily Inspection \_\_\_\_\_ Monthly Inspection \_\_\_\_\_

CONDITIONS TO BE CHECKED EXPLAIN IF ANY OF THE ANSWERS ARE YES  
 Mark each item with a N = No defect or Y = Yes a defect has been defined.

Functional operating mechanisms shall be checked for excessive wear, deterioration of parts, and visual inspection of hooks, hoist & load attachment chains, wire, slings.

- Bearings: Loose, worn
- Brakes: shoe wear
- Bridge: alignment out of true (indicated by screeching or squealing of wheels)
- Bumpers on bridge: loose, missing, improper placement
- Collector shoes or bars: worn, pitted loose, broken
- Couplings: loose, worn
- Drum: rough edges on cable grooves
- End stops on trolley: loose, missing improper placement
- Gears: lack of lubrication or foreign material in the gear teeth
- Guards: bent, broken, lost
- Hoisting cable: broken wires, kinked or twisted
- Hook Block: chipped sheave wheels
- Hooks: straightening (note when permanent set of hook is greater than 15% in excess of normal throat opening the hook shall be replaced.)
- Lights (if installed) are functional
- Limit switch: functioning improperly
- Lubrication: overflowing on rails, dirty cups
- Mechanical parts (rivets, covers, etc.) loose
- Overload relay: frequent tripping of power
- Rails (trolley or runway): broken, chipped, cracked
- Wheels: worn (indicated by bumpy riding)
- Electric control buttons are functioning improperly and/or not clearly marked as to direction of travel

Other Conditions: Functional Operating Mechanism

- Excessive wear
- Deterioration of parts
- Non-compliant hooks
- Hoist and load attachment chain – wires and slings for signs of wear or deterioration

ADDITIONAL COMMENTS:

NOTE: THE INFORMATION ON CRANE INSPECTION SOURCE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS, 8th EDITION, BY NATIONAL SAFETY COUNCIL 1986.

## **CHAPTER 15. CONTRACTOR SAFETY AND HEALTH HAZARD CONTROL NOTIFICATION POLICY**

### **A. Purpose**

OR-OSHA regulations require notification of outside contractors regarding safety programs for Hazard Communication, Asbestos, Hazardous Waste, Hazardous Energy Control and Confined Space. In addition to these basic requirements all outside contractors performing work in our buildings or facility will be notified of the basic Emergency Action Plan and safety rules.

Contractors who are hired to perform maintenance work involving the need to control hazardous energy or enter confined spaces will be informed of the programs and the associated hazards that the plant services staff is aware of. The notification is not designed to take over the contractor's safety responsibilities to his or her employees but to provide appropriate notification under the OR-OSHA rules.

APPENDIX 1 provides the contractor notification information including: notification checklists for the overall safety rules, control of hazardous energy, and confined space entry, asbestos, and hazardous waste. Managers that are responsible for the outside contract will ensure that this material is provided to the contractor and that a signed statement is completed by the contractor. Safety and occupational health questions should be directed to the department/project manager.

### **B. Applicable Legal Standards**

This policy applies to all contractors hired including, but not limited to: construction, electrical, confined space entry contractors, and bulk chemical haulers.

1. Federal: 29 CFR 1910
2. State: Oregon OAR 437 Division 2

### **C. Responsibilities**

1. Department or Project Managers: The Department or Project Manager generally has the overall responsibility for construction and electrical contractors. It is the Department or Project Manager's responsibility to review the Safety Manual and obtain signed statements from the contractor representatives. If there is any joint work done between the contractor and our employees it is the manager's responsibility to see that proper Energy Control Procedures are carried out. The Department or Project Manager is responsible for keeping a contractor's file and if the same contractors are used for an on-going period of time the notification will be updated on an annual basis.
2. The contractor file should note the following:
  - a) Ensures that the safety policies and updated.
  - b) Specific safety questions are responded to.
  - c) Audits the Contractor Notification system.

- d) Assists in ensuring that contractors follow our policies and do not endanger our employees.

#### **D. Process Overview**

The contractor notification process flow:

1. The Department or Project Manager is to determine scope of contractor work and prepare an adequate contract or purchase order for the services.
2. Select the contractor and provide the scope of work and the applicable chapters of the Safety Manual.
3. The Department or Project Manager reviews the applicable chapters of the Safety Manual. This will ensure that the contractor and employees acknowledge the information and sign the acknowledgment letter.
4. Copy of the acknowledgment letter is provided to contractor and a copy is retained in the contractor's file.
5. The Department or Project Manager is responsible to conduct periodic follow-up with the contractor representative to ensure the safety of our employees and that contractor is operating in a safe manner.

#### **E. Specific Program Review**

Each applicable OR-OSHA program must be reviewed with the contractor prior to performing work.

#### **Informing Contractors of Hazard Communication Program**

When outside contractors perform work in the college facilities the Department or Project Manager will ensure that the contractor management representative is informed of any hazardous chemicals and needed controls.

The following methods will be used to inform outside contractors of the potential chemical hazards in their work areas:

1. Hazardous chemicals to which they may be exposed while on the job site.
2. Precautions the employees may take to lessen the possibility of exposure.
3. Location of MSDS for chemicals they are potentially exposed to.
4. Temporary Service employees will be trained in the same manner as permanent employees.
5. If additional information is needed the Department or Project Manger should be contacted for assistance.

6. The contractor will be provided with the applicable chapters of the Safety Manual. The acknowledgment form is to be signed by the Contractor's representative. A copy of the signed checklist is to be kept by the Department or Project Manager and kept as part of the contract file. (See forms.)
7. If the contractor is bringing in hazardous materials then the Department or Project Manager will ensure that the contractor has all the pertinent MSDS at the job site.

### **Asbestos Material Notification**

When outside contractors perform building renovations or remodeling where asbestos building materials may be present, the department or project manager will ensure that the contractor management representatives are informed of the presence of asbestos building materials. This will include ensuring that an assessment is done to determine if an asbestos abatement project must be done first.

The following methods will be used to inform outside contractors of the presence of asbestos containing building materials:

1. The Department or Project Manager will ensure that the contract manager is informed of the planned work.
2. The Department or Project Manager will review the plans with the contractor to determine the scope of the work assessing the potential for contact with asbestos containing materials.
3. If asbestos materials will be disturbed or need to be removed the Department or Project Manager will arrange for a licensed asbestos abatement contractor to perform the work prior to the other contracting operation.
4. The Department or Project Manager will audit the asbestos abatement project work to ensure that the project is done safely and per OR-OSHA rules.
5. The asbestos abatement contractor will also be provided with the applicable chapters of the Safety Manual and notification of pertinent hazard informational checklists are to be signed by the Contractor's representative. A copy of the signed checklist is to be kept by the Department or Project Manager and kept as part of the contract file. (See forms.)

### **Hazardous Waste Notification**

When outside contractors perform work involving the removal and disposal of hazardous waste the Department or Project Manager is responsible for crew and process safety. The procedures used are to meet DEQ/EPA requirements.

The following methods will be used to inform outside contractors of the potential chemical hazards in their work areas:

1. Department or Project Manager will only contract with licensed Hazardous Waste haulers and dispose of materials only in permitted methods.

2. Department or Project Manager will ensure that the hazardous waste contractor's employees are trained in the required DEQ and or-OSHA programs and are informed as to the materials that are being collected, hauled and disposed of.
3. Department or Project Manager will ensure that all the proper DEQ/EPA and DOT paper work is prepared and available for all the parties involved as required.
4. The contractor will be provided with the applicable chapters of the Safety Manual and notification of pertinent hazard informational checklists are to be signed by the Contractor's representative. A copy of the signed checklist is to be kept by the Department or Project Manager and kept as part of the contract file. (See forms.)

### **Informing Outside Contractors of the Hazardous Energy Control Program**

1. When outside contractors are hired at to work on machines and equipment, their activities may require that hazardous energy be controlled, as a result, a copy of our procedures will be given to that contractor and a mutually agreed upon procedure established concerning the lockout/tagout devices that will be used to protect employees and the contractor's workers. This coordination will help to ensure that all of our employees know what kind of work is to be performed, where and when it is to be performed, and how they are being protected.
2. Department or Project Manager will identify the energy isolating devices for the contractor, as necessary. The contractor's employees will be responsible to lockout all devices capable of locking or place an energy control tag on or as near the device as possible.
3. A copy of the contractor notification letter and hazard information will be provided and a signed copy shall be returned to our Department or Project Manager and kept as part of the contract file. (See forms.)

### **Informing Outside Contractors of the Confined Space Plan and Known Space Hazard**

If a contractor is hired to perform confined space entry work then the Department or Project Manager shall see that the contractor's management representative is notified of our Confined Space Policy and the known hazards associated with the space. This notification is to ensure that the company complies with rule 1910.146 (c) (8) of the Confined Space regulations. If we contract for confined space entry work as the host employer the Department or Project Manager is responsible to:

1. Inform the contractor that a permit required space is involved in the work. This includes information about any chemicals in the space per Hazard Communication requirements.
2. Apprise the contractor of the hazards our organization has identified and any experience employees have had with the space.
3. Apprise the contractor of any precautions our employees have taken for entry.
4. Coordinate entry operations with the contractor if more than one contractor or if our employees will also be entering the space.

5. Debrief the contractor to determine if any problems were encountered requiring changes in procedures.
6. A copy of the contractor notification letter and hazard information will be provided and a signed copy shall be returned to our Department or Project Manager and kept as part of the contract file. (See forms.)

### **Hot Work - Welding Permission System**

When outside contractors are hired and their work involves welding, it is the Department or Project Manager's responsibility to see that the contractor uses a hot work permit process to ensure that all fire hazards are controlled. The hot work permit is required to be done by the contractor and available to our Department or Project Manager. The permit will not be required if the welding is done in a welding shop area.

Department or Project Manager will provide the contractor with the basic form required by our organization. If the contractor has their own hot work permit and system that can be used as long as it is done and available.

## **CHAPTER 16. FORKLIFT SAFETY**

### **Statement**

The City of North Plains does not own or operate forklift machinery. Employees are not authorized to use forklifts.

## CHAPTER 17. EXCAVATION SAFETY

### A. Definitions

1. An **excavation** is any human-made cut, cavity, trench or depression in an earth surface, formed by earth removal. All excavations five feet or more in depth are required to have a protective system in place to protect employees from injury unless:
  - a) The excavation is made entirely in stable rock; or
  - b) The excavation is less than five feet in depth and a competent person has examined the ground and determined there is no indication of a potential cave-in.
  - c) Acceptable protective systems include:
    - I. Sloping
    - II. Benching
    - III. Support or shield systems (i.e., timber systems, aluminum hydraulic shoring systems, trench coffins, etc.).
2. A **competent person** is someone who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them. This person must have had specific training in, and be knowledgeable about, soils analysis, the use of protective systems and the requirements of the occupational safety and health rules.
3. At every excavation where employee exposure can be reasonably anticipated, OSHA requires that we or our contractor assign a competent person to conduct a daily inspection of the excavation. That inspection should include the adjacent areas and protective systems utilized (i.e., shoring, shielding, benching or sloping) for evidence of situations that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions. An inspection must be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections must also be made after every rainstorm or other hazard-increasing occurrence.

### B. Minimum Requirements for Excavations

1. ~~Utility~~ Utilities must be located ~~(?) must be done~~ before ANY digging or excavation is started.

2. Excavations deeper than 5' requires cave in protection (shielding, benching or shoring).
3. A Competent Person is required at all excavations.
  - a) The competent person is TRAINED, AUTHORIZED and RESPONSIBLE to ensure that the excavation or trench remains stable, the personnel working in the excavation have the ability to quickly exit, that the atmosphere is safe, that spoils are placed so they can't shift, that personnel work safely near heavy equipment, and that the work area remains safe until the excavation is back-filled.
  - b) Conduct frequent and regular inspections of the jobsite, materials and equipment for unsafe or unhealthful conditions or practices.
4. Sloping and benching techniques must be evaluated by the competent person.
5. Trenches or pits 4' deep or greater must be tested for atmospheric hazards before entering if there is potential for these hazards to be present and continuously monitored if there is a chance they could develop.
6. Any excavation deeper than 20' must have cave-in protection designed by a qualified engineer.

### **C. General Hazards of Excavations**

The Competent Person must evaluate all of the following conditions and specify methods of control.

1. Unstable soils: cave in, sloughing, shifting soils, water in the excavation
2. Underground and overhead utilities
3. Vehicle traffic
4. Nearby structures, sidewalks, roadways that could collapse from vibration, water flow or soils changes
5. Heavy equipment operations
6. Atmospheric hazards – low oxygen, flammable gas, toxics, vehicle and equipment exhaust
7. Falls and other physical hazards
8. Spoils piles

9. Flying debris (kicked off from heavy equipment, dump trucks)

#### **D. Safety Rules for Excavation Operations**

1. Hi-visibility outerwear is required when working around heavy equipment.
2. Means of egress (ladders) must be available to every worker in the space within 25 feet of their work locations. (Place ladders every 25 feet along the length of the excavation).
3. Ladders must be secured and extend 3' above the top of the trench.
4. Spoils piles must be set back at least 3' from the edge of the trench or excavation. Optimal distance for heavy spoils or equipment is as far back from the edge as the trench is deep.
5. Workers should be aware of these hazards, alert the Competent Person if changes develop, and exit the space until hazards can be properly controlled.
6. The Competent Person is responsible for atmospheric testing. See Confined Space Atmospheric Testing Procedure.
7. No work is permitted in a trench or excavation with accumulated or flowing water.
8. Workers must stay back at least 3 feet from the swing zone of heavy equipment.
9. Working below a suspended load is prohibited.
10. Hard hats are required when working near heavy equipment.
11. Using an excavator bucket to lift or lower personnel is prohibited.
12. Be aware of vehicle and equipment exhaust accumulating in trenches and confined spaces. Use continuous monitoring as necessary.
13. When working in or near an excavation, keep alert to changes in conditions including shifting soils, changes in soil appearance or odor, water flowing in, vehicle exhaust, vibration and other conditions that could cause cave-in, atmospheric hazards or other problems to develop. EXIT immediately and reassess if conditions change while working in an excavation.
14. The water is being removed and kept at a safe level; or a safety harness/lifeline is available and used.
15. Ensure control of loose rock or soil, one of the following methods have been implemented:
  - a) Scaling of the face of the excavation has been done to remove any hazardous loose material;

- b) Protective barriers are installed to contain the loose material; or any other effective means is in place and there is no danger from loose materials.

## E. Excavation Equipment

Equipment operators must be specifically trained and authorized before operating excavation equipment. Operators must conduct pre-use and work site inspections. Operators are responsible for ensuring safety in the work area.

## F. Hydro-Excavation (Vac) Trucks

~~Vac Trucks have additional hazards of high volume suction hoses, pressure wands, high-pressure air and water, tanks that are confined spaces, hydraulic tip beds, hoppers and doors. Operators must be trained and authorized on the equipment.~~

- ~~3. Any person working near or operating a Vac Truck must have additional training to recognize and control hazards.~~
- ~~5. Special blocking procedures must be followed when elevating beds, hoppers, tanks or doors to ensure that the equipment (bed or door) does not fall.~~
- ~~7. Tanks and Hoppers on Vac Truck are Confined Spaces. DO NOT ENTER.~~
- ~~9. Stay clear of the vacuum end of the stinger. Tremendous suction power can cause serious injury.~~
- ~~11. Do not point the pressure nozzle towards any person.~~
- ~~13. Positively stop and lock out pressure vacuum pressure, air and water pressure before servicing or un-jamming equipment.~~
- ~~15. Required PPE includes hardhat, eye protection, hearing protection, steel toe boots, gloves. The City of North Plains does not own or operate hydro-evacuation (Vac) Trucks. Such work is contracted.~~

## G. Speed Shore

1. Speed Shore shielding must be installed and removed FROM THE GROUND LEVEL only. See Speed Shore Manual for requirements on installation, inspection and removal.
2. Speed shore must be installed under the direction of a Competent Person, and must be inspected daily and periodically throughout the work shift.
3. Always install shoring from the top down and remove from the bottom up.

4. Shielding must extend above the ground level and be within 24" of the bottom of the trench.
5. Trench protectors must extend 4' past side shielding.
6. Structures outside of the trench must be braced or protected from cave in (i.e. poles, buildings, sidewalks).

#### **H. Water in Excavations**

Do not enter a trench or excavation that has accumulated or flowing water.

1. Identify source of water (surface runoff or line break).
2. Shut off source upstream (as close as possible to line break).
3. Pump water out of excavation without entering (Competent Person must monitor this).
4. Divert or capture pumped water and surface water.
5. Brace adjacent structures as needed based on conditions.
6. Inspect and protect for cave in before entry.
7. Competent person ensures appropriate shielding or shoring before employees enter.

#### **I. Trench Emergencies and Rescue**

1. If an emergency occurs in an excavation, contact 9-1-1 immediately.
2. Trench rescue can be extremely hazardous because of conditions ranging from unsafe atmosphere to cave-in. Co-workers often become victims of secondary collapse during rescue attempts. Call 9-1-1 right away for emergency help.
3. When calling 9-1-1, be SPECIFIC about the exact nature of the emergency in order to mobilize the correct technical rescue resources as quickly as possible

## CHAPTER 18. FALL PROTECTION COMPLIANCE PLAN

### A. General Procedure

City of North Plains has responsibility for employee job site safety, and our management and employees must be accountable for meeting these responsibilities. Our staff will work with the Safety Committee in ensuring that the work can be done in a safe manner and that appropriate fall protection is either available or provided.

There are various rules that apply to fall protection. To reduce confusion, City of North Plains will comply with the most restrictive system which is found in the Construction Code under Fall Protection. Basic maintenance work, as well as construction related work, requires fall protection systems at 6 feet. General industry related work requires fall protection at 4 feet but does not require a written plan. This policy applies to all fall protection needs. Changes to the following procedures may only be done by the job site competent person (usually the Supervisor or Lead Person) if different regulations apply.

1. Fall protection needs will be evaluated by the Competent Person which may be the Foreman or Lead Person. When fall protection is needed based on the construction site needs or general maintenance or repair work task, it is the Director of Public Works' responsibility to implement the system and train all our employees in the system.
2. Exception from the use of conventional fall protection equipment is only available when our employees are engaged in leading edge work, or residential construction work and it can be demonstrated that it is not feasible or it creates a greater hazard to use conventional fall protection equipment.

A Fall Protection Plan work sheet has been developed and is found as APPENDIX 1 of this compliance plan. The Fall Protection Plan includes the following elements:

1. Prepared by our competent person and is specific for the site where the leading edge work is being done.
2. A copy of the Fall Protection Plan is to be kept at the job site.
3. Our competent or qualified person shall approve any changes to the Plan.
4. The Plan shall be implemented, and employees are to follow the plan.
5. The Plan must document why conventional fall protection can not be used.
6. The Plan will outline the measures taken to reduce or eliminate the fall hazard for workers.
7. The Plan identifies each location where conventional equipment is not feasible to use. These locations are classified as controlled access zones.
8. If there is an employee fall, the qualified person is to investigate the circumstances of the fall, determine if the Fall Protection Plan needs to be changed and shall implement those changes.

## B. Fall Protection System

A fall protection system can be a variety of equipment, facilities and work procedures. The fall protection used, like a guardrail, can prevent a fall by restraining a worker from falling or safely stopping a fall by arresting the fall through the use of personal protective equipment.

Oregon OSHA requires fall protection when employees are working 6 feet or higher (four feet in general industry activities). The systems can include:

### 1. Guardrail System

- a) A **standard guard railing** which consists of a top rail, midrail and posts which can support an impact of 200 pounds in any direction. The top rail must be installed at 42 inches, plus or minus three inches, from floor level. Required on all open-sided floors, ramps, balconies, walkways and platforms elevated 4 to 6 feet or more above the floor, ground or other working surface. The midrail and toe board may be omitted where materials are regularly passed over the edge or where the railing is set back 12 inches or more from the leading edge.
  - b) If **wire rope** is used for top rails it must be marked at six-foot intervals or less with high visibility material.
  - c) A **standard stair railing** which is constructed in the same configuration as a standard railing but at a height of 30-34 inches. Required on all fixed stairways consisting of 4 or more risers, be installed on each open side.
  - d) A **standard handrail** which consists of a single lengthwise member 1-1/2 to 2 inches in diameter mounted on a wall or partition with brackets at a height of 30 - 34 inches from the stair tread. Required on enclosed stairways, preferably on the right side descending.
  - e) A **standard toe board** is at least 4 inches in vertical height and is installed no more than 1/4 inch above floor level at the perimeter of the open-sided working/walking surface. Required whenever persons pass below and there is a potential for being struck by falling objects.
2. **Safety Net Systems** are arrest systems consisting of mesh nets, including panels, connectors and other impact absorbing components. These would not generally be used by our employees. If safety nets are needed, our competent person will oversee the installation and performance requirements of the system. Oregon OSHA and WISHA have specific requirements for the performance of safety nets.
  3. **Personal Fall Arrest Systems.** A safety harness and lanyard fall arrest system where the harness is worn on the body and attached to a lanyard and lifeline or structure. The lanyard consists of a rope suitable for supporting one person. One end is fastened to a safety harness and the other end is secured to a substantial object or a safety line. Required wherever a person is exposed to a fall while working from an unguarded surface more than 6 feet above a lower level or at any height above dangerous equipment.

(NOTE: The Occupational Safety and Health Rules do not require compliance with the

safety harness rules whenever ". . . the work is of limited duration and limited exposure and the hazards involved in rigging and installing the safety devices equal or exceed the hazards involved in the actual construction, these provisions may be temporarily suspended provided adequate risk control is exercised under competent supervision." Consequently, no point of attachment may be available at the site. Under these circumstances, the employee shall not access the unguarded area unless an alternate protection is used to prevent exposure to a fall hazard (i.e., observation from a safe area, a secured ladder, a guard railed personnel lift or scaffold).

The Director of Public Works will provide affected employees with a safety harness and lanyard for use at sites meeting the above requirements. Training and proper fitting will be conducted prior to use. It will be the responsibility of the person using the belt/harness and lanyard to confirm with the client that the lifeline to which the lanyard is secured is above the point of operation and is capable of supporting a minimum dead weight of 5,000 pounds.

- a) When it is not feasible to use physical barriers to protect employees from falls, personal protective equipment (PPE) shall be used.
- b) PPE shall be chosen based on the following:
  - I. Distance of potential fall.
  - II. Impact on the body from the PPE during a sudden stop.
  - III. Intended use of PPE (stopping fall as opposed to retrieval from a confined space).
  - IV. Fall arresting forces on the body.
- c) Type II chest harnesses shall be worn for rescue purposes only, and in no case be used to stop a vertical fall. Attachment must be located in the center of the wearer's back near the shoulder level or above the wearer's head for fall arrest.
- d) When a worker(s) enters a confined space, a helper wearing the same PPE shall be stationed at the entrance to the confined space and shall monitor those inside for the duration of the project.
- e) Personal retrieval systems for rescue from below ground level tanks or confined spaces.
  - I. Authorized personnel shall ensure the use of a lifeline attached to a manual or power operated winch with steel cable retracting lifeline. Alternatively, a block and tackle or ratchet winch can provide the lifting mechanism with limited human effort after the victim has been hooked up, provided a lock or over speed mechanism is incorporated. An anchorage point, such as that provided by a seven or ten-foot tripod should be available before work is commenced.
  - II. Full body harnesses, yokes and wristlets shall be used when retrieval is through narrow openings.

f) Strength Requirements

- I. All components of fall protection shall meet the strength requirements of American National Standard A10.14-1991.

NOTE: These strength requirements are based on one worker use. If multiple workers are tied off to a single lifeline, the strength requirement must be increased by the number of workers affected (i.e., two workers, one lifeline, minimum breaking strength must be 10,800 pounds at the center of line; three workers, one lifeline, minimum breaking strength must be 16,200 pounds, and so forth).

- II. When tied off while working on suspended scaffolding, each worker must use a separate line which is not connected to the scaffold.
- III. Permanent lifelines must be a minimum one-half inch steel cable capable of supporting 5,000 pounds per person at the center of the line.
- IV. Hardware for body belts/harnesses and lanyards must be drop forged, corrosion resistant with smooth edges, a minimum of 5,000-pound breaking strength without cracks or breaks.
- V. Knots shall not be used in components of a fall protection system since a knot will reduce the strength by at least 50%.
- VI. Lanyards shall be kept as short as possible. In no case shall they exceed six feet to minimize the possibility and length of a free fall without contacting a lower level; and must completely stop a free-fall and limit deceleration distance to 3.5 feet with a shock-absorbing lanyard.
- VII. Wire rope or rope-covered wire lanyards shall not be used where impact loads are anticipated or where there is an electrical hazard.
- VIII. Belts and lanyards that have been subjected to impact loading shall be removed from service and destroyed or returned to the manufacturer for recertification.
- IX. Rope lanyards shall not be stored in work pouches where they may be subject to deterioration.
- X. Where there is exposure to abrasion, spun nylon rather than filament nylon shall be used.
- XI. Only safety belts/harnesses with locking snaps shall be used to prevent "rollout" or disengagement. All hardware shall be compatible with the locking snap.
- XII. Only shock-absorbing lanyards shall be used to reduce the fall arresting impact on the wearer.

XIII. Tongue-type buckles shall be used in lieu of friction buckles since friction buckles may lose the ability to stop detachment if contaminated with grease or oil.

g) Inspection and Recordkeeping

- I. The user shall inspect the fall protection prior to each use.
- II. A trained and competent person shall inspect all components of each fall protection device at least once each six months. The dates of this biannual inspection shall be recorded on a permanent tag attached to the belt.
- III. Every five years the fall protection system shall be returned to the manufacturer for recertification.
- IV. Any defective body belt/harness or lifeline shall be destroyed or returned to the manufacturer before use.
- V. Any unit subjected to impact loading shall be immediately removed from service and destroyed or sent to the manufacturer for recertification.

4. **Ladder Climbing Safety**

- a) A ladder cage is required on all fixed ladders more than 24 feet to a maximum unbroken length of 30 feet. Employees shall not ascend a fixed ladder more than 24 feet long unless a properly designed cage is installed or a ladder-climbing device is available.
- b) A ladder-climbing device may be substituted for ladder cages in certain circumstances and usually consists of a safety belt, lanyard, friction brake and sliding attachment.
- c) A floor opening cover is required whenever an opening measures 12 inches or more in its least dimension through which a person may fall. Whenever the cover is not in place, the opening must be constantly attended by a person or temporary guardrails or other physical barricades installed.

5. **Positioning Devices.** These systems are primarily intended to protect construction workers doing form work and reinforcing steel work which would not generally apply to electrical construction work.

6. **Warning lines and safety monitoring systems** have specific applications for roofing operations on low-slope roofs. Safety monitoring systems also have applications when conventional fall protection cannot be used and when no alternative measures have been implemented. These systems do not provide a physical means of preventing or arresting falls but warn of the leading edge. An example could be a barricade is a device which physically prevents entry by a person into a danger zone.

**C. When Fall Protection Systems are Required**

**SUMMARY OF THE REQUIREMENTS**  
**HEIGHT BEFORE GUARDING OR FALL PROTECTION IS REQUIRED BY OSHA**

<b>ACTIVITY</b>	<b>HEIGHT</b>	<b>OSHA RULE</b>
Construction:		
1. Guard Rails	6 feet**	1926.500(d)
2. Fall Protection General	6 feet	1926.500-502
3. Low pitched roofs	6 feet (10 ft exception)*	437-03-75
4. Steel erection	25 feet max unless floor exists within 30 feet	1926.105
5. Perimeters and Over Water	25 feet max at perimeter	1926.105
6. Fixed Ladders	24 feet	1926.1053(a)(19)
7. Excavations	Edge not seen	1926.501(b)(7)(l)
1. General Industry – General	4 feet	1910.23
2. Fall Protection General	10 feet	437-50-50-(1)
3. Fixed Ladders w/o Cages	24 feet	437-02-1910.27(d)(5)

NOTE: To measure height:

1. The distance from the working/walking surface to grade or lower level.
2. The worst fall hazard should be considered in each particular application or work/access method.

\* Oregon OSHA permits roof work up to 10 feet above a lower level without guardrails, safety nets or arrest system if they are constructing leading edges, setting walls and trusses, or doing roofing and sheathing work.

\*\* Guardrails can be required at less than 6 feet if there is dangerous equipment below.

#### **D. Employee Training**

1. Our employees are all potentially exposed to fall hazards. As a result, all employees are required to be part of the Fall Protection Training Program. This program will be given by the employee's supervisor or Safety Manager.
2. Employee attendance shall be documented by a written certification report. (See copy of form in APPENDIX 3)
3. At least the latest training certification shall be maintained by the Supervisor or employee assigned recordkeeping.
4. The program includes the following training materials:
  - a) Recognition of fall hazards due to the nature of the work area.

- b) Fall protection requirements.
  - c) Correct procedures for erecting, maintaining, disassembling and inspecting the fall protection system to be used.
  - d) The use and operation of the following systems as they apply to the need for fall protection at the job site:
    - I. guardrail systems
    - II. personal fall arrest systems
    - III. safety net system
    - IV. warning line system
    - V. safety monitoring
    - VI. controlled access zones
    - VII. and other protection to be used
  - e) Each employee needs to understand their role if a safety monitoring system is used.
  - f) The correct procedures for the handling and storage of equipment and materials and erection of overhead protection.
  - g) The role of employees in fall protection plans as applicable.
  - h) Review of the OSHA fall protection standard.
5. Retraining will be given if there are changes on the fall protection program, if the equipment changes, or if there are any inadequacies in the use of fall protection systems or equipment.

**APPENDIX 1 MODEL FALL PROTECTION PLAN**

The following plan was developed to ensure that Fall Protection is properly addressed, and when conventional protection is not feasible, a written plan is developed which meets Oregon OSHA requirement.

The Fall Protection Plan must be completed, signed and posted at each jobsite where standard guard-railing and other conventional fall protection is not in use.

**FALL PROTECTION PLAN**

Job Number: \_\_\_\_\_  
Job Description: \_\_\_\_\_  
Foreman: \_\_\_\_\_  
Crew Size: \_\_\_\_\_ Date: \_\_\_\_\_

1. Identify all fall hazards in the work area:  
\_\_\_\_\_  
\_\_\_\_\_
2. Describe the methods of fall arrest or fall restraint to be provided:  
\_\_\_\_\_  
\_\_\_\_\_
3. Describe the correct procedures for the assembly, maintenance, inspection and disassembly of the fall protection system to be used:  
\_\_\_\_\_  
\_\_\_\_\_
4. Describe the correct procedure for handling, storing and securing tools and materials:  
\_\_\_\_\_  
\_\_\_\_\_
5. Describe the method of providing overhead protection for workers who may be in or pass through the area below the work site:  
\_\_\_\_\_  
\_\_\_\_\_
6. Describe the method for prompt, safe removal of injured workers:  
\_\_\_\_\_  
\_\_\_\_\_

I (we) certify that I (we) have received proper explanation, instruction and information on the above material. I (we) have been trained in the proper use of all safety equipment being utilized on the referenced job:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**GENERAL FALL PROTECTION WORK PLAN**

Job Location: \_\_\_\_\_

Job Description: \_\_\_\_\_

**INSTRUCTIONS:**

1. Inspect the site prior to the start of the job.
2. Complete this form.
3. Post at worksite where it can be plainly seen along with the summarized plan.

**FALL HAZARDS - 6 feet or more**

_____	Open Beam/Truss/Frame Work	_____	Standard Scaffold/Staging
_____	Beyond Guard Rails	_____	Roof Edge
_____	Hanging Scaffolds/Staging	_____	Erection/Disassembly
_____	Tank/Vessel/Equipment Tops	_____	Ripe Rack System
_____	Equipment Frame	_____	Floor Opening
_____	Other Describe: _____		

**OTHER HAZARDS**

_____	Electrical	_____	Hot Surfaces	_____	Overhead
_____	Water	_____	Foot Traffic	_____	Below
_____	Chemical	_____	Other: Describe _____		

**METHODS OF PROTECTION TO BE USED**

_____	Guardrail	_____	Harness	_____	Rope Protection
_____	Parapet Wall	_____	Safety Block	_____	Sling/Runners
_____	Barrier Structure	_____	Rope Grab	_____	RFP w/Boatswain
_____	Fixed Lanyard	_____	Life Line	_____	Safety Net
_____	Retractable Lanyard				
_____	Warning Line (low pitched roofs/floors only)				
_____	Other Describe: _____				

**METHODS OF WORK AREA ACCESS**

_____	Portable Ladder	_____	Roof	_____	Truss/Beam
_____	Fixed Ladder	_____	Manlift	_____	Framework
_____	Scaffolding	_____	Staging	_____	Suspended Decent
_____	Other: _____				

**General Fall Protection Work Plan – Page 2**

**METHODS OF MATERIAL/TOOL HANDLING**

- Line
- Hoist
- Crane
- Material stored at least 10 feet away from edge and no higher than barrier.
- Tool Belt
- Tool Bucket
- Designated Lifting Zone

**METHODS OF SECURING LANYARDS/LINES (Minimum 5,000 lbs Holding Force)**

- Ladder Siderail (secured)
- Eye Bolts
- Other: \_\_\_\_\_
- Structural Workings
- Steel Pipe

**LOCATION OF ANCHOR POINTS (DESCRIBE)**

\_\_\_\_\_

\_\_\_\_\_

**OTHER**

Fall protection equipment inspected prior to use      Yes \_\_\_ No \_\_\_

Equipment inspected by: \_\_\_\_\_

Name of monitor assigned (leading edge work only) \_\_\_\_\_

Has the work plan been reviewed in detail with person assigned working below  
Yes \_\_\_ No \_\_\_

Barrier tape/tags set up for overhead hazards when people are working below  
Yes \_\_\_ No \_\_\_

**PERSON ASSIGNED**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**COMPETENT PERSON:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

## APPENDIX 2 FALL PROTECTION TERMS

The following terms are used in the last section on fall protection equipment:

**Anchorage:** A secure point of attachment for lifelines, lanyards or deceleration devices.

**Arresting Force:** The force generated by arresting the test weight that is transmitted through the fall arresting system components to the anchorage or load cell.

**Body Belt (Safety Belt):** A strap that both secures around the waist and attaches to a lanyard, lifeline or deceleration device.

**Body Harness:** Straps that are secured about an employee in a manner that distributes the arresting forces over at least the thighs, shoulders and pelvis, with provisions for attaching a lanyard, lifeline or deceleration device.

**Buckle:** Any device for holding the body belt, chest harness and body harness closed around the employee's body.

**Chest Harness:** Straps secured only around the chest with shoulder straps to assure proper chest strap positioning.

**Classification According to Use:** Safety belts, harnesses and lanyards are classified according to their intended use as:

**Type I:** A personal fall arrest/restraint system that is used to arrest a wearer's fall from a work level. It consists of an anchorage(s), hardware, body belt or body harness, a lanyard or deceleration device and may include a lifeline, or a device that subsequently allows the employee to be lowered to the ground or lower work level.

**Type II:** A personal fall restraint system that is used to keep a wearer at the work level or limit any free fall to a maximum of two feet from the work level. This system consists of a body belt, a chest or body harness and anchor, as applicable.

**Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous or dangerous to employees, and who has the authority to take prompt corrective measures to eliminate such hazards.

**Construction Activities:** Work for construction, alteration or repair, including painting and decorating.

**Drop Line:** A vertical line from a fixed anchorage, independent of the work surface, to which the lanyard is affixed.

**Fixed Anchorage:** A secure point of attachment, not part of the work surface, for drop lines, lifelines or lanyards. The fixed anchorage must be capable of supporting a minimum deadweight of 5,400 pounds per person.

**Hardware:** Buckles, D-rings, snap-hooks and associated hardware used to attach the components of the system together.

**Lanyard:** A flexible line used to secure a body belt or body harness to a lifeline or directly to a point of anchorage.

**Lifeline:** A horizontal line between two fixed anchorage, independent of the work surface to which the lanyard is secured either by tying off or by means of a suitable sliding connection. The lifeline must be capable of supporting a minimum deadweight of 5,400 pounds per person applied at the center of the lifeline.

**Positioning Belt:** Simple or compound straps that may be secured about the body to hold the wearer in the work position.

**Positioning Device System:** A body belt or body harness system rigged to support employees on elevated vertical surfaces, such as a wall or windowsill, allowing them to work with both hands free.

**Qualified Person:** One who by possession of a recognized degree, certificate or professional standing, or by extensive knowledge, training and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work or the project.

**Quick Release Buckle:** A multiple component buckle that can be released with one positive action and whose releasing mechanism is positively locked in normal use.

**Retracting Line:** An automatic tensioning system that pays out and retracts line at a certain speed and locks or brakes when the speed is exceeded.

**Rope Grab:** A device that attaches to a lifeline as an anchoring point to provide a means for arresting a fall.

**Snap Hook:** A self-closing device with a keeper, latch or other similar arrangement that will remain closed until manually opened. This includes self-closing, single action, double action, double locking snap hooks.

**Strength Factor:** The ratio of the minimum strength of a personal fall arrest/restraint system to the arresting force generated by a 250 pound person free-falling the length of the lanyard.

**Suspension Belts:** A design of simple or compound straps that may be secured about the wearer's body as an independent work support. These are commonly referred to as saddle belts, boatswain's chairs or tree trimmers' belts.

**Tie Off:** When a user wearing personal fall protection equipment connects directly or indirectly to an anchorage. The term also means the condition of an employee being connected to an anchorage.

**Total Fall Distance:** The maximum vertical distance between a wearer's body belt or body harness attachment points before and after the fall is arrested, including lanyard extension and/or deceleration distance.

### **APPENDIX 3 TRAINING RECORD FORMS**

The following record is to be used by the qualified trainer to document the name of the employees trained, date of the training, and the signature of the person who conducted the training.

If Local 48 provided the training or another employer your supervisor will complete the certification form based on the training dates and type of information provided by the employee. Your supervisor needs to decide if the training was adequate for your current work assignment.

#### **A. Employee Fall Protection Written Certification Record**

#### **B. Employee Previous Training Record**

**FALL PROTECTION**

**EMPLOYEE TRAINING CERTIFICATION**

**(Employee Name)**

**(Date)**

The \_\_\_\_\_ fall protection policy and procedures have been reviewed with me. This included information on the following:

1. Recognition of fall hazards due to the nature of the work area.
2. Fall protection requirements.
3. Correct procedures for erecting, maintaining, disassembling and inspecting the fall protection system to be used.
4. The use and operation of the following systems as they apply to the need for fall protection at the job site:
  - a) guardrail systems
  - b) personal fall arrest systems
  - c) safety net system
  - d) warning line system
  - e) safety monitoring
  - f) controlled access zones
  - g) other protection to be used.
5. Each employee needs to understand their role if a safety monitoring system is used.
6. The correct procedures for the handling and storage of equipment and materials and erection of overhead protection.
7. The role of employees in fall protection plans as applicable.
8. Review of the OSHA or WISHA fall protection standard.
9. The \_\_\_\_\_'s enforcement and discipline policy.

**I understand the fall protection procedures and policy. My supervisor has shown me the specific equipment procedures.**

\_\_\_\_\_  
**Employee Signature**

\_\_\_\_\_  
**Trainer's/Supervisor's Signature**

\_\_\_\_\_  
**Date**

The following training has been given to ensure that the employee understands the specific fall equipment operation procedure. This includes providing the following information: (Fill in as applicable)

- A.**
- B.**

**FALL PROTECTION  
EMPLOYEE'S PAST TRAINING CERTIFICATION**

\_\_\_\_\_  
(Employee Name)

\_\_\_\_\_  
(Date)

My previous employer \_\_\_\_\_ or other trainers provided me with fall protection training that included the following:

1. Recognition of fall hazards due to the nature of the work area.
2. Fall protection requirements.
3. Correct procedures for erecting, maintaining, disassembling and inspecting the fall protection system to be used.
4. The use and operation of the following systems as they apply to the need for fall protection at the job site:
  - a) guardrail systems
  - b) personal fall arrest systems
  - c) safety net system
  - d) warning line system
  - e) safety monitoring
  - f) controlled access zones
  - g) other protection to be used.
5. Each employee needs to understand their role if a safety monitoring system is used.
6. The correct procedures for the handling and storage of equipment and materials and erection of overhead protection.
7. The role of employees in fall protection plans as applicable.
8. Review of the OSHA or WISHA fall protection standard.
9. The company's enforcement and discipline policy.

**I understand the fall protection procedures and policy. My supervisor has shown me the specific equipment procedures.**

\_\_\_\_\_  
**Employee Signature**

\_\_\_\_\_  
**Trainer's/Supervisor's Signature**

\_\_\_\_\_  
**Date**

The following training has been given to ensure that the employee understands the specific fall equipment operation procedure. This includes providing the following information:  
(Fill in as applicable)

- A.
- B.
- C.

## CHAPTER 19. WELDING – FIRE & EXPOSURE CONTROL

### A. Purpose

This welding safety policy is designed to ensure that employees are aware of the hazards associated with welding and to ensure proper fire protection. Welding is a hazardous operation, which must be performed in accordance with safety standards and by qualified trained employees. This chapter is to ensure work place safety and compliance with OSHA standards.

City employees do not weld stainless steel.

### B. Applicable Regulation

1. OAR 437, Division 2-1910.252 Gas and Electric Welding

### C. Chapter Format

This chapter reviews welding safety procedures. Specific information on the welding hazards is also found in the *Hazard Communication Program*.

### D. Definitions

**Approved** means listed or approved by a nationally recognized testing laboratory.

**Welding and welding operator** means any operator of electric or gas welding and cutting equipment.

**All other welding terms** used in OSHA standard are in accordance with American Welding Society - Terms & Definitions A3-0.969.

### E. Policy

The following precautions are required to be taken by our employees who perform maintenance welding operations. Electric arc welders are also responsible to be trained in electrical hazards (See Chapter on Electrical Safety).

### F. Responsibilities

Director of Public Works and supervisors are responsible to see that only trained employees are authorized to weld. Fire watch personnel will be trained in their duties by the Maintenance Supervisors. Management is required to see that adequate maintenance services are provided and used to ensure safe operating conditions and that all Energy Control Procedures (see Chapter on Lockout/Tagout Safety) are followed as they relate to maintenance welding on equipment.

**Authorized Operators:** Employees who are authorized to perform welding must follow all safety procedures as outlined in this chapter, by OSHA rules and manufacturer's recommendations. Employees are required to inspect their equipment daily prior to operation to ensure that all safeguards are on the equipment. Any problems are to be reported immediately to the employee's supervisor.

All accidents will be reported immediately to the supervisor.

**Director of Public Works:** Assists in providing employee training and auditing facilities for compliance with this chapter and OSHA regulations.

**Safety Committee:** The Safety Committee will include review of welding safety in their quarterly inspection activities.

## G. Procedures

1. **Basic Hazard Awareness:** Safety in the many processes of welding and cutting requires certain precautions and standardized operating procedures. Welding is associated with five principal hazards. It is the responsibility of the employee supervisor and/or Safety Coordinator to ensure that all welders and fire watch personnel understand these hazards.
  - a) Electric shock and burns must be guarded against when using welding equipment. The degree of risk depends on the type of welding process. Welders are to be trained in Electrical Safety.
  - b) Fire Hazards:
    - I. Flying sparks are the source of many industrial fires.
    - II. In areas where flammable gases, vapors, and dusts are present, only a tiny spark is needed to set off a fire or explosion. Flying pieces of molten metal can fall through cracks and openings as small as nail holes and ignite combustibles that are beyond the welder's visual range.
    - III. Hot metal that is being welded or cut can cause fires if allowed to contact flammable or combustible material such as drip pans, oily rags or combustible materials.
    - IV. The torch flame used by the welder is another source of ignition and must be handled carefully. Compressed oxygen gas used in welding is a fire hazard because it supports and intensifies the rate of combustion of other materials
  - c) Radiant energy hazards in welding include: ultraviolet light, infrared light and visible light.
    - I. Exposure to the welding arc (ultraviolet rays) may result in very painful irritation of the eyes and skin.
    - II. Infrared rays act upon the eyes simply as heat and can cause a burn or irritation of the tissue affected.
    - III. The glare of excessive visible radiation can cause headaches, eye fatigue and loss of visual efficiency.

IV. Protective eye wear must be worn during welding to prevent harm to the eyes from light energy

- d) Inhalation of Welding Fumes: Welding produces airborne exposures to a variety of potentially harmful gases and fumes. Fumes are generated from both the base metal and the wire or rod used in the process. The hazard level from metal fumes depends on the type of metal. In steel welding exposures include iron oxides, chromium, manganese, and nickel. The gases also vary with the type of shield gases used in arc welding, type of rods and fluxes used.
2. Authorized Employees: Welding shall be performed by qualified welders only.
  3. Welding operations need to be performed away from flammable materials.
    - a) If the object to be welded cannot be moved to a safe location, all movable hazardous materials should be moved to a safe location.
    - b) If this cannot be done, a **Hot Work Permit** will need to be issued by the Supervisor. The permit will describe the welding zone controls such as enclosing in fireproof blankets or other protective shields when materials in nearby areas can be affected by welding arcs, flames, sparks, spatter, slag or heat. (See APPENDIX 1 - Hot Work Permit).
    - c) Fire protection equipment should be kept immediately at hand and ready for use. In critical areas, the fire protection equipment should be staffed while welding operations are being conducted.
  4. Care must be taken against allowing mixtures of fuel gas and air to accumulate.
  5. Flammable and other potentially hazardous materials should be cleaned from surfaces before welding is started.

**(Note:** The very high temperature of the welding air or flame can cause ignition of materials such as grease, oil or surface coating. These materials will also break down under heat to hazardous gases or fumes).
  6. No welding, cutting or similar work should be undertaken on tanks, barrels, drums or other containers which have been contaminated with flammables unless the contamination is first removed so that there is no possibility of fire or emission of toxic vapors. (See Hot Work Permit).
  7. Adequate ventilation should be provided as protection against accumulations of toxic fumes and gases. If such precautions cannot be taken, the welder should wear appropriate respiratory protection (See *Personal Protective Equipment and Respiratory Protection*).
  8. If welding is to be done in enclosed or confined spaces, a specific "confined space" work permit will be required to be obtained from the management staff. The permit will detail the specific precautions that are required to perform welding in confined areas (See *Confined Space Procedures*).
  9. Precautions need to be taken to avoid shock from electric welding operations.

- a) The welder should not stand in water while doing electric welding.
  - b) Hot electrode holders should not be dipped in water.
  - c) Cables with damaged insulation or exposed conductors must not be used, and should be replaced before any such work is attempted. If necessary to join lengths of cable, it must be done using only connectors designed specifically for the purpose.
10. Personal Protective Equipment: The face, body and hands should be covered to prevent burns from splatter, slag, sparks, or hot metal. Flame proof; heat-insulating gloves should be worn during welding operations. Wet or excessively worn gloves should not be used.
11. The eyes and skin should be protected against the glare and radiation from a welding arc or flame.
- a) Helpers and attendants should also be provided with eye protection.
  - b) Other personnel in the vicinity of welding operations should be protected from reflections by suitable shields and barriers.
12. Respiratory equipment may be necessary if ventilation is not sufficient. Specific operation requirements should be made by your supervisor.
13. Gas cylinders must be handled carefully (breaking the neck from a full cylinder can turn the bottle into a missile).
14. Cylinders shall be secured to keep them from falling.
15. Acetylene cylinders must always be maintained in an upright position.
16. Oxygen cylinders should be separated from fuel-gas cylinders or other combustible materials by at least 20 feet or by a fire-resistant barrier at least 5 feet high.
- a) Oxygen from supply cylinders should be checked to make certain they are not leaking, especially in enclosed spaces, where it can cause ignition of materials that are not normally highly flammable.
  - b) Grease and oil should be kept away from and never used to lubricate oxygen cylinder valves or regulators.
  - c) Do not handle oxygen cylinders with oily hands or gloves.
  - d) Before connecting an oxygen bottle, first open the valve slightly for an instant, then close and attach an oxygen regulator to the valve. Always stand to one side when opening the valve.

17. Empty gas cylinders should be marked and have their valves closed tightly. Valve protection caps should always be in place on those cylinders designed for caps, except when the cylinder is in use or being connected/disconnected.
18. Gas cylinders should be stored out of the direct rays of the sun and away from other sources of heat. Never strike an arc against a gas cylinder.
19. Do not use a hammer or wrench to open cylinder valves. If valves will not open by hand, notify the supplier. Always open the cylinder valve slowly.
20. Do not tamper with cylinder valves or try to repair them. Send the supplier a prompt report of the trouble, including the cylinder serial number, and follow the supplier's instructions.
21. Backflow or flashback preventers shall be installed on all oxygen/flammable gas welding and cutting units between the torch or blowpipe and the hoses.
22. Gauges shall be maintained in good condition. Cracked or missing glass shall be replaced prior to use.

## **APPENDIX 1 HOT WORK PERMIT PROCEDURES AND INSTRUCTIONS**

### **A. Instructions:**

1. This cutting and welding permit may be issued only by a SUPERVISOR and must be used for all cutting and welding done outside of an approved shop.
2. Complete the checklist below before issuing the permit.
3. Display the permit in a highly visible location at the job site.
4. The permit is to be picked up by the Supervisor who issued the permit 2 to 4 hours after the work is completed. In the event of a change of shifts, it is the responsibility of the supervisor who issued the permit to notify the supervisor following that a permit was issued and will need to be picked up.
5. If you issue a permit late in the work shift and the worksite is down the following shift, notify the next shift supervisor to pick up the permit.
6. If a permit is issue for an unstaffed area of the worksite, notify the next shift supervisor so that he/she can check there more often.
7. All permits are to be turned into the Director of Public Works after the final checkup has been completed.

**CHECKLIST OF REQUIRED PRECAUTIONS:**

- \_\_\_\_\_ Floor swept clean of combustibles
- \_\_\_\_\_ Floor wet down
- \_\_\_\_\_ Flammable liquids removed; other combustible, if not removed, wet down or protected with fire-resistant tarpaulins or metal shields.
- \_\_\_\_\_ Explosive atmospheres in area are eliminated.
- \_\_\_\_\_ All wall and floor openings covered or provide an additional firewatch at the lower level.
- \_\_\_\_\_ Firewatch will be provided during and for at LEAST 30 minutes after work and during any coffee or lunch breaks.
- \_\_\_\_\_ Firewatch is supplied with a charged fire hose.
- \_\_\_\_\_ Firewatch is trained in the use of this equipment.

**JOB DATE:** \_\_\_\_\_

**LOCATION:** \_\_\_\_\_

**NATURE OF JOB:**

\_\_\_\_\_

**WELDER'S NAME:**

\_\_\_\_\_

**TIME STARTED:** \_\_\_\_\_

**TIME FINISHED:** \_\_\_\_\_

**FIREWATCH NAME:**

\_\_\_\_\_

**FINAL CHECKUP BY MAINTENANCE:** Work area and all adjacent areas to which sparks and heat might have spread (i.e. floors above and below and opposite side of walls) were inspected after the work was completed and found to be fire safe.

**MAINTENANCE PERSON SIGNATURE:** \_\_\_\_\_

**FINAL CHECKUP BY SUPERVISOR:** 2 TO 4 hours after work completed

**DATE & TIME:** \_\_\_\_\_

**SIGNATURE OF PERSON RESPONSIBLE:** \_\_\_\_\_

**CUTTING – WELDING HOT WORK PERMIT – PAGE 2**

**DATE:** \_\_\_\_\_

**LOCATION:** \_\_\_\_\_

**WORK TO BE DONE:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**MAINTENANCE:**

\_\_\_\_\_  
\_\_\_\_\_

**INSTRUCTIONS TO FIRE WATCH:**

\_\_\_\_\_  
\_\_\_\_\_

**FIRE WATCH NAMES:**

\_\_\_\_\_  
\_\_\_\_\_

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## CHAPTER 20. ELECTRICAL SAFETY

### A. Purpose

This Electrical Safety Program was established to provide the maximum protection to our employees whenever they must work around any electrical hazards.

Employees involved in the maintenance, repair, and servicing of equipment that requires electrical energy or that work around overhead or underground electrical lines must follow these guidelines.

PLEASE ALSO REFER TO THE LOCKOUT/TAGOUT PROGRAM WHEN COMPLETING WORK ON EQUIPMENT AND MACHINERY

### B. Applicable Legal Standards

1. State: OAR 437 Division 2, Subdivision S (Electrical Safety - 1910.301 – 1910.399)
2. Federal: 29 CFR 1910.399

### C. General Responsibilities

1. Direct Supervisor: The Direct Supervisor is responsible for the overall implementation of the policy working with the Safety Committee and employees. The Direct Supervisor is also responsible to see that there are periodic audits and an annual review of the policy. To protect employees from hazards when working with electrical equipment, tools and appliances the direct Supervisor must:
  - a) Inspect all electrical equipment to make sure the equipment is safe
  - b) Require that all electrical equipment is used for its approved or listed purpose.
  - c) Require that all electrical equipment used or located in wet or damp locations is designed for such use.
  - d) Require that electrical equipment that isn't marked (?) by the manufacturer can't be used.
  - e) Identify disconnecting means (see also lockout/tagout program).
  - f) Maintain electrical fittings, boxes, cabinets and outlets in good condition.
  - g) Maintain all flexible cords and cables in good condition and use safely.
  - h) Guard electrical equipment to prevent employees from electrical hazards.
  - i) Require that all electrical equipment be effectively grounded.
  - j) Require that all electrical equipment have overcurrent protection.

2. Authorized Employees: Only workers and supervisors who have received special training to recognize and understand the particular hazards involved with the tasks to be performed and the type and magnitude of electrical hazards are authorized to implement the procedure.
3. Affected Employees: An affected employee is one whose job requires him/her to perform maintenance on items powered by electrical energy, or that performs work around areas with overhead and/or underground electrical lines.
4. Training: A key component of this program is employee training. It is the supervisor's responsibility to see that all employees exposed to electrical hazards are trained on working around them. The authorized employees are to receive additional specialized training as outlined in this program. The training must be documented by the Direct Supervisor.

#### **D. Inspection of Electrical Equipment**

All electrical equipment must be inspected to make sure there are no recognized hazards likely to cause your employees' death or serious physical harm. Determine the safety of the equipment by using the following list:

1. Has been approved or listed by a recognized testing laboratory, such as Underwriters Laboratories (UL) or other approving agency.
2. Is approved, or listed as approved, for the purpose it is being used.
3. Has strong and durable guards providing adequate protection, including parts designed to enclose and protect other equipment.
4. Is insulated
5. Won't overheat under conditions of use.
6. Won't produce arcs during normal use.
7. Is classified by:
  - a) Type
  - b) Size
  - c) Voltage
  - d) Current Capacity
  - e) Specific Use
  - f) Other Factors

## E. Ensuring Electrical Equipment Used for Approved or Listed Purpose

**Electrical Outlets:** Places on an electric circuit where power is supplied to equipment through receptacles, sockets and outlets for attachment plugs.

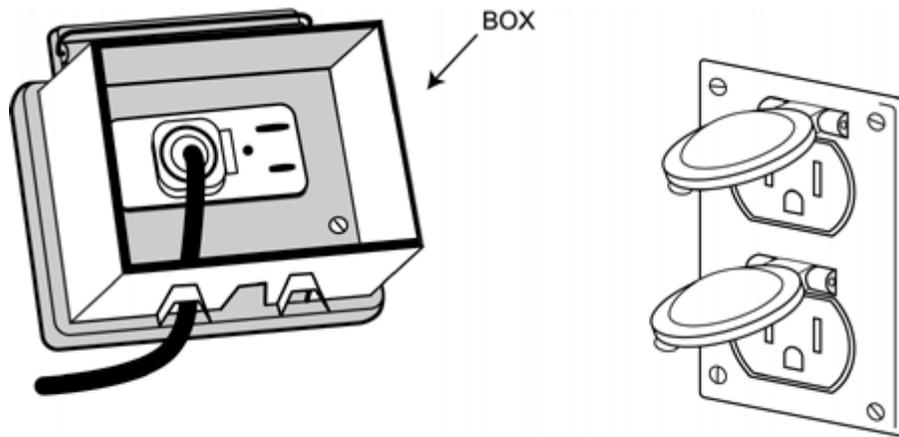
**Receptacles:** Outlets that accept a plug to supply electric power to equipment through a cord or cable.

1. Electrical outlets should be rated equal or greater to the electrical load supplied.
2. The proper mating configuration should exist when connecting the attachment plug to the receptacle.
3. When electrical outlets, cord connectors, and receptacles are joined, they should accept the attachment plug with the same voltage or current rating (see common electrical outlet configurations below).

SOME COMMON ELECTRICAL OUTLET (RECEPTACLE) CONFIGURATIONS				
	15 Ampere	20 Ampere	30 Ampere	50 Ampere
Two Pole 3 - Wire Grounding 125 Volt				
Three Pole 3 - Wire 125/250 Volt				
Note: A 20-ampere "T-slot" outlet or cord connector may accept a 15-ampere attachment plug of the same voltage rating.				

## F. Ensure Electrical Equipment Used or Located In Wet / Damp Locations Is Designed For Such Use

1. Fixtures and receptacles located in wet or damp locations must be approved for such use. They must be constructed or installed so that water cannot enter or accumulate in wireways, lampholders, or other electrical parts.
2. Cabinets, fittings, boxes, and other enclosures in wet or damp locations should be installed to prevent moisture or water from entering or accumulating inside.
  - a) In wet locations, these enclosures must be weatherproof.
  - b) Switches, circuit breakers, and switchboards located in wet locations must be in weatherproof enclosures.



### G. Electrical Equipment Has Manufacturers Markings

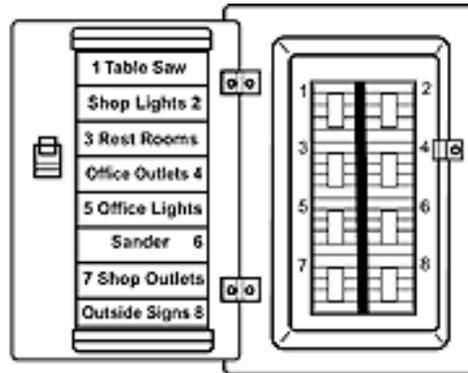
1. Markings on electrical equipment must be durable and appropriate for the environment.
2. Appropriate markings include:
  - a) The manufacturers name or
  - b) Trademark or
  - c) The organization responsible for the product and
  - d) Voltage, current, wattage or other ratings as necessary (see illustration below).



### H. Identify Means of Disconnecting

1. The disconnect means (such as on/off switches and circuit breakers) must be marked to show when it's open and closed, and what equipment it controls unless located and arranged so the purpose is obvious.

2. Each service, feeder and branch circuit should be marked at its disconnecting means or overcurrent device to show when the circuit is open / closed, and what circuit it controls (unless located and arranged so the purpose is obvious).
3. Markings on the disconnect should be durable and appropriate to the environment that the disconnect is located.



## I. Maintain Electrical Fittings, Boxes, Cabinets and Outlets in Good Condition

### Openings and Covers

1. When conductors enter boxes, cabinets or fittings the following must be in place:
  - a) The conductor must be protected (i.e. the wires must be protected from abrasions)
  - b) Openings where conductors enter should be effectively closed so that the internal wiring is not exposed
  - c) Any unused openings should be covered with blanks to ensure that employees are not exposed to the internal wiring
2. Provide pull boxes, junction boxes, and fittings with covers approved for the purpose.
3. Each outlet box must have a cover, faceplate, or fixture canopy in completed installations.
4. Covers for outlet boxes with openings for flexible cord pendants must have bushings to protect the cord, or have a smooth and well rounded surface where the cord touches the opening.
5. Metal covers must be grounded.

Areas in front of electrical panels, circuit breaker boxes, and similar equipment which operate at 600 volts or less:

1. Must have sufficient working area at least 30 inches wide for operational and maintenance of the equipment.

2. Must be kept clear and free of stored materials so that employees can access this equipment for servicing, adjustments or maintenance.
3. Should have at least one access route that is free of obstructions.
4. Have at least 3 feet (36 inches) of working space in front from floor to ceiling (measured from the exposed live part or the enclosure front). Consider installing signage that states this requirement to ensure that the 3 feet clearing is maintained at all times.
5. Should have adequate indoor lighting for clear viewing of the area.
6. Have at least 6 feet 3 inches of headroom

The table below shows the area you must keep clear depending upon the layout of the electrical equipment:

<b>Conditions*</b>	<b>0-150 Volts to Ground</b>	<b>151-600 To Ground</b>
<b>A</b>	<b>3 ft</b>	<b>3 ft</b>
<b>B</b>	<b>3 ft</b>	<b>3 ½ ft</b>
<b>C</b>	<b>3 ft</b>	<b>4 ft</b>

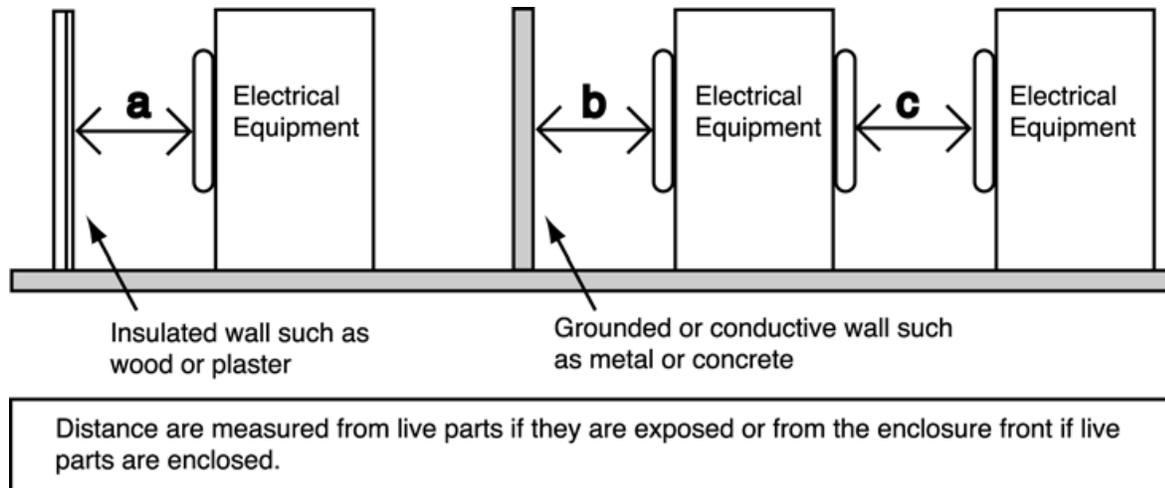
Minimum clear distances may be 2 feet 6 inches for equipment built or installed before 3/20/82.

\*Conditions a, b, and c are as follows:

a = Exposed live parts on one side and no live or grounded parts on the other side of the working space, or exposed live parts on both sides effectively guarded by suitable wood or other insulating material. Insulated wire or insulated bus bars operating at not over 300 volts aren't considered live parts.

b = Exposed live parts on one side and grounded parts on the other side.

c = Exposed live parts on both sides of the workspace (not guarded as provided in condition (a) with the operator between the panels)



## J. Maintain All Flexible Cords and Cables in Good Condition & Use Safely

**Exemption:** Rules do not apply to cords and cables that are an internal part of factory assembled appliances and equipment, like the windings on motors or wiring inside electrical panels.

1. You must perform a visual inspection of all flexible cords and cables on portable cord and plug connected equipment and extension cords before use on each work shift. It is not required that you visually inspect portable cord and plug connected equipment and extension cords that stay connected once in place and aren't exposed to damage until they are moved. Defects and damage to look for include:
  - a) Loose parts
  - b) Deformed or missing pins
  - c) External defects and damage
  - d) Damage to the outer covering or insulation
  - e) Pinched or crushed covering or insulation that might indicate internal damage
2. You must remove from service any defective or damaged cord until repaired and tested.
3. Make sure flexible cords and cables are used as described.
4. Use flexible cords only as follows:
  - a) Wiring of equipment and appliances
  - b) Data processing cables approved as a part of the data process system.
  - c) Pendants

- d) Wiring for fixtures
  - e) Connecting portable lamps or appliances to an approved outlet with an attached plug
  - f) Connecting stationary equipment that is frequently changed with an attachment plug energized from an approved outlet.
  - g) Preventing noise or vibration transmission
  - h) Appliances that have been designed to permit removal for maintenance and repair if the appliance is equipped with an attachment plug energized from an approved outlet.
  - i) Elevator cables
  - j) Wiring of cranes and hoists.
5. If additional power supplies are needed, utilize an approved surge protector with multiple outlets.
  6. Extension cords cannot be plugged into or piggybacked onto other extension cords or surge protectors.
  7. If the light on the surge protector is flickering or off, remove the surge protector from service. This flickering or absence of a light indicates that a power surge has gone through the surge protector, and it is no longer working appropriately.
  8. Cheater boxes plugged into electrical receptacles are not allowed.
  9. Flexible cords cannot be used in the following ways:
    - a) As a substitute for fixed wiring of a structure
    - b) To run through holes in walls, ceilings, or floors
    - c) To run through doorways, windows or similar openings
    - d) To attach to building surfaces
    - e) To conceal behind building walls, ceilings, or floors
    - f) To raise or lower equipment
  10. Flexible cords and cables are approved and suitable for the way they will be used and the location where they will be used.
  11. Do not fasten or hang cords and equipment in any way that could cause damage to the outer jacket or insulation of the cord. Use tension relief devices.
  12. Insulation on flexible cords and cables must be intact.

13. Flexible cords and electrical cords must be:

- a) Connected to devices and fittings so that any pulling force on the cord is prevented from being transmitted to joints or terminal screws on the plug.
- b) Used only in continuous lengths without splice or tap.

14. Do not plug or unplug equipment or extension cords of equipment that is energized using wet hands.

#### **K. Temporary Use of Cords**

1. Temporary electrical power and lighting installations that operate at 600 volts or less are used only:

- a) During and for remodeling, maintenance, repair or demolition of buildings and similar activities.
- b) Experimental or development work
- c) For no more than 90 days for;
  - I. Christmas decorative lighting
  - II. Carnivals
  - III. Other similar purposes

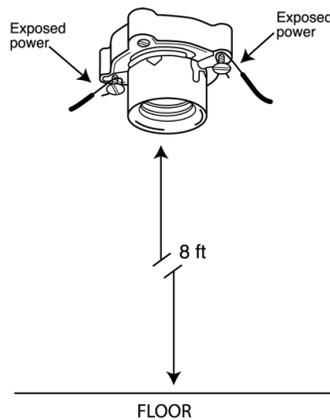
2. Flexible cords and electrical cords used on a temporary basis must be protected from accidental damage by avoiding sharp corners and projections, especially where they pass through doorways and other pinch points.

#### **L. Guard Electrical Equipment to Protect Employees from Electrical Hazards**

1. Guard live parts of electrical equipment operating at 50 volts or more against accidental contact by any of the following means:

- a) Approved cabinets or other forms of approved enclosures.
- b) By location in a room, vault or similar enclosure that is accessible only to employees qualified to work on the equipment. Entrances to rooms and other guarded locations containing exposed live parts must be marked with conspicuous warning signs forbidding unqualified persons from entering.
- c) By permanent, substantial partitions or screens so that only employees qualified to work on the equipment will have access within reach of the live parts. Any openings must prevent accidental contact with live parts by employees or objects carried by employees.
- d) By location on a balcony, gallery, or platform that will exclude unqualified personnel.

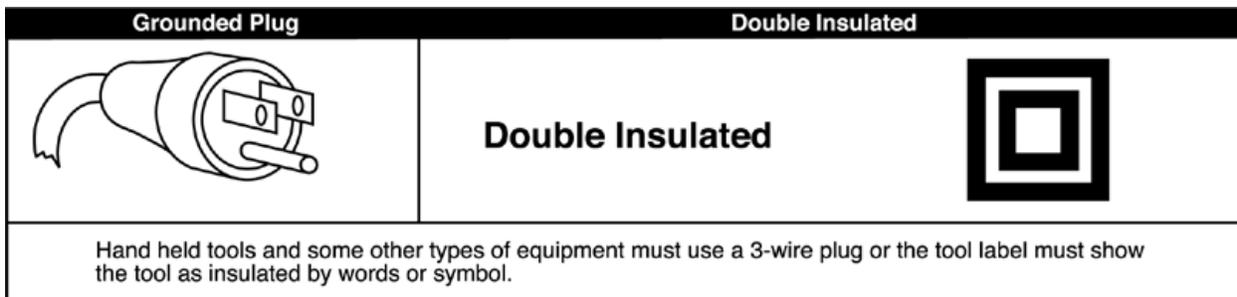
- e) By being located 8 feet or more above the floor or other working surface.
2. All electrical appliances, fixtures, lampholders, lamps, rosettes, and receptacles should not have live parts normally exposed to employee contact.
    - a) Rosettes and cleat type lampholders at least 8 feet above the ground may have exposed parts.
  3. In locations where electric equipment would be exposed to physical damage, enclosures or guards must be so arranged and of such strength as to prevent such damage.



#### **M. Ensure Electrical Equipment Is Effectively Grounded**

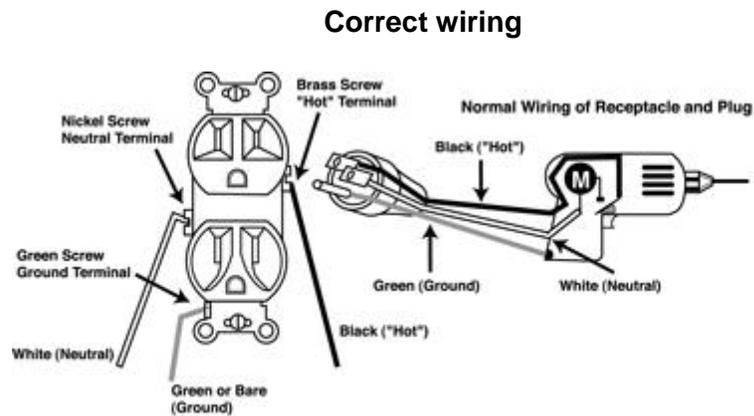
1. The path to ground from circuits, equipment, and enclosures must be permanent and continuous.
2. Grounding prongs must not be removed from electrical cords and each electrical receptacle must provide a location for a ground prong. Cords without grounding prongs must not be used.
3. Equipment connected by cord and plug must be grounded under these conditions:
  - a) Equipment with exposed noncurrent carrying metal parts
  - b) Cord and plug connected equipment which may become energized
  - c) Equipment that operates at over 150 volts to ground
  - d) Equipment in hazardous locations.

4. You must ground the following type of equipment:
- a) Hand-held motor-operated tools
  - b) Refrigerators
  - c) Freezers
  - d) Air conditioners
  - e) Clothes washers and dryers
  - f) Electrical aquarium equipment
  - g) Hedge clippers
  - h) Electric lawn mowers
  - i) Electric snow blowers
  - j) Web scrubbers
  - k) Tools likely to be used in damp or wet locations
  - l) Appliances used by employees standing on the ground, on metal floors or working inside of metal tanks or boilers.
  - m) Portable hand lamps.
5. Grounding can be achieved by using tools and appliances equipped with an equipment grounding conductor (3 prong plug and grounded electrical system).

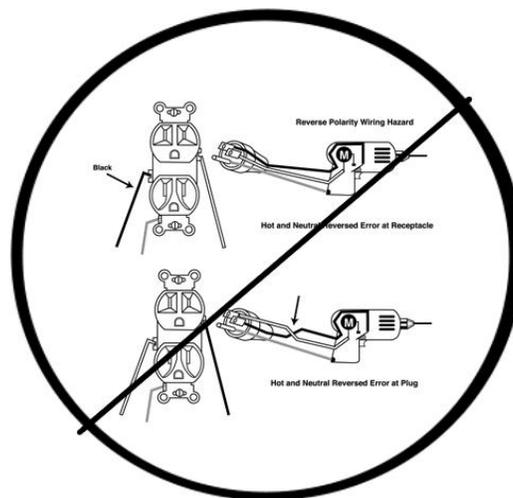


6. Exposed metal parts of fixed equipment that don't conduct electricity (but may become energized) must be grounded if the equipment is in a wet or damp location and isn't isolated.
7. Grounded wires must be identified and look different than the other conductors (wires).
8. Grounded conductors should not be attached to any terminal or lead to reverse polarity of the electrical outlet or receptacle. (see illustrations showing examples of wiring).

9. Grounding terminals or grounding-type devices on receptacles, cords, connectors, or attachments plugs should not be used for purposes other than grounding.



**Incorrect Wiring**



Reverse polarity wiring can cause a faulty tool to start as soon as it is plugged in or not stop when the switch is released. This could cause an injury. An extremely dangerous type of reverse polarity wiring switches the hot and ground wires. This causes the body of the tool or appliance to be "hot". Touching the tool and conductive surface can result in serious or even deadly shock.

## **N. Electrical Equipment Has Overcurrent Protection**

1. All electrical circuits that are rated at 600 volts or less must have overcurrent protection.
2. Protect conductors and equipment according to their ability to safely conduct electrical equipment.
3. Overcurrent devices should not interrupt the continuity of grounded conductors unless all conductors are opened at the same time, except for motor running overload protection.

- a) Protect employees from electrical arcing or suddenly moving electrical parts by locating fuses and circuit breakers in safe places. If this isn't possible, install shields on fuses and circuit breakers.
4. The following fuses and thermo cutouts should have disconnecting mechanisms:
    - a) All cartridge fuses accessible to nonqualified persons
    - b) All fuses on circuits over 150 volts to ground
    - c) All thermal cutouts on circuits over 150 volts to ground
    - d) The disconnecting mechanism must be installed so you can disconnect the fuses or thermal cutouts without disrupting service to equipment and circuits unrelated to those protected by the overcurrent device.
  5. Provide easy access to overcurrent devices for each employee or authorized building management personnel.
  6. Protect the overcurrent devices by locating them away from easily ignitable material.
    - a) They must be placed to avoid exposure to physical damage.
  7. Circuit breakers:
    - a) Must clearly indicate when they are open (off) and closed (on)
    - b) That operate vertically must be installed so the handle is in the "up" position when the break is closed (on).
    - c) Used as switches in 120-volt, fluorescent lighting circuit must be approved for that purpose and marked "SWD".
    - d) That has arcing or suddenly moving parts should be shielded or located so employees won't get burned or injured by the operation of the circuit breaker.
  8. Fuses that have arcing or suddenly moving parts must be shielded or located so employees won't get burned or injured by the operation of the fuses.

#### **O. Ground-Fault Circuit Interrupters (GFCI)**

1. OAR 437-003-0404 requires ground-fault circuit interrupters (GFCIs) on all 125-volt, single-phase, 15-, 20-, and 30-ampere receptacles that are not part of the permanent wiring of a building or structure.
2. If a permanently wired receptacle (not equipped with GFCI protection) is used for temporary power in a construction project, GFCI protection must be provided at the user end.

3. Portable plug-in and cord-type GFCIs are probably the most practical devices for construction workers who use cord sets for temporary power when there is no protection at the source.
4. GFCIs sense imbalances or differences along the electrical circuit and shut it down when needed. For this reason, GFCI can be critical to workers in wet environments. The rule for GFCI does not exempt work with intrinsically safe or double insulated tools.
5. GFCIs must either be built into the overall circuit, as part of the outlet receptacle, or using protected cord sets or GFCI devices.
6. GFCI protection can be anywhere on the circuit as long as it works effectively to protect the worker. Protection can be for the entire circuit, the outlet receptacle, or the extension cord.
7. For receptacles with more than 125 volts, single-phase, or more than 30-amp capacity, use GFCI **or** have a program that ensure equipment is grounded - see OAR 437-003-0404(3).
8. There must be a written description of assured equipment – grounding program at each job site that includes specific procedures.
9. One or more competent persons should be designated to run the program. (A competent person is someone who is capable of identifying hazards and has authority to promptly correct them).
10. Each day, inspect all extension cords and equipment (plug connected) for external defects before using them.
11. Conduct periodic tests of all grounding conductors for continuity and test each receptacle or plug to ensure that the grounding conductor is connected to the right terminal.
12. Testing is required before the first use, before the first use after a repair, before use after any event that could cause damage, and at least every three months (six months for fixed cords sets and receptacles not exposed to damage).
13. Record all tests by identifying each cord, receptacle, or piece of equipment and its test date or test interval. Keep the test record until a new record replaces it using logs, color coding, or other means. These records must be available on the job site.
14. All electrical receptacles located within 6 feet of a water source (i.e. sink) must have a GFCI on the receptacle or the circuit that controls that receptacle.

## **P. Working Around Buried Electrical Lines**

1. Any time workers are required to start any in-ground work like digging or driving objects, OR-OSHA standard OAR 437-003-1926.651(b)(1) requires locating utilities before digging. (for more information on the standard read [www.cbs.state.or.us/external/osha/pdf/rules/division\\_3/div3p.pdf](http://www.cbs.state.or.us/external/osha/pdf/rules/division_3/div3p.pdf)).

2. The primary contractor or facilitator of the work must call the Oregon Utility Notification Center (OUNC) before starting work. In the Portland metro area, the number is (503) 246-6699. In all other areas of Oregon, call (800) 332-2344.
3. OUNC will then come out to locate and mark all utilities in the area where the work will be performed.
4. The contractor or facilitator of the work must ensure that power to any electrical lines in the area of work must be deenergized to ensure employee safety.
5. If a worker contacts an underground line or pipe, the contact could be fatal.
6. In addition, the contractor or person responsible for the work is responsible for all repair costs if they did not contact OUNC before starting work.

#### **Q. Working Around Overhead Electrical Lines**

1. To protect those working near overhead power lines from accidental contact, the Oregon Legislature passed into law the *High Voltage Overhead Line Safety Act*. See ORS 757.800 and 757.805.
2. The law provides that no work activities take place within 10 feet of a high voltage overhead power lines until the following two requirements are met:
  - a) The responsible party must notify the utility operating the line of the intended work activity.
  - b) The responsible party and the utility must complete mutually satisfactory precautions for the activity.
3. As soon as you inform your local utility of your intended work activity, the following can occur:
  - a) Coordination of work schedules
  - b) Identification of temporary mechanical barriers to prevent contact with the lines.
  - c) Temporary de-energizing and grounding of the lines
  - d) Temporary raising or moving of the lines.

**R. PPE**

1. Employees must wear appropriate Personal Protective Equipment (PPE) when working around electrical sources. (see PPE standard at General Industry Div. 2 Subdivision I - 1910.137 Electrical Protective Equipment). Electrical protective equipment is subject to regular electrical tests to ensure they are still providing protection to the employee.
2. Electrical protective equipment shall be maintained in a safe, reliable condition.
3. Insulating equipment shall be inspected for damage before each day's use and immediately following any incident that can reasonably be suspected of having caused damage. Insulating gloves shall be given an air test, along with the inspection.
5. Insulating equipment shall be stored in such a location and in such a manner as to protect it from light, temperature extremes, excessive humidity, ozone, and other injurious substances and conditions.
6. Insulating equipment with any of the following defects may not be used:
  - a) A hole, tear, puncture, or cut;
  - b) Ozone cutting or ozone checking (the cutting action produced by ozone on rubber under mechanical stress into a series of interlacing cracks);
  - c) An embedded foreign object;
  - d) Any of the following texture changes: swelling, softening, hardening, or becoming sticky or inelastic.
  - e) Any other defect that damages the insulating properties.

## CHAPTER 21. LADDER SAFETY

We take portable ladders for granted because they're so easy to use. Yet more workers are injured in falls from ladders than from any other elevated surface — roofs, scaffolds, balconies, even stairs. Why do workers fall from ladders? Most falls happen because workers select the wrong type of ladder for the job or the ladder is set up improperly or the ladder shifts or slips unexpectedly. Workers also fall when their foot slips, they lose their balance, they overreach, or something knocks the ladder over.

### A. How to Select Your Ladder

Which ladder is the right one for your job? You'll save time, energy and reduce your risk of injury if you select the correct one. Key factors are type and style, length, duty rating, and the material from which the ladder is made. Most portable ladders are either non-self-supporting, such as an extension ladder, or self-supporting, such as a standard stepladder. But there are also combination ladders that convert quickly from a stepladder to an extension ladder. You're likely to find the right size, shape, and type of ladder to accomplish your task within one of these categories.

- **Extension ladders (non-self-supporting).** Extension ladders offer the greatest length in a general purpose ladder. The ladder consists of two or more sections that travel in guides or brackets, allowing adjustable lengths. The sections must be assembled so that the sliding upper section is on top of the lower section. Each section must overlap its adjacent section a minimum distance, based on the ladder's overall length. The overall length is determined by the lengths of the individual sections, measured along the side rails. The table below shows the minimum overlap for two-section ladders up to 60 feet long.

Ladder length	Overlap
Up to 36 feet	3 feet
36 to 48 feet	4 feet
48 to 60 feet	5 feet

Most extension ladders are made of wood, aluminum, or reinforced fiberglass. Wood ladders can't have more than two sections and must not exceed 60 feet. Aluminum and fiberglass ladders can have as many as three sections; however, the overall length must not exceed 72 feet. Individual sections of any extension ladder must not be longer than 30 feet. Extension ladders can be used only by one person at a time.

- a) **Is it necessary to “tie off” an extension ladder to prevent it from slipping?**  
You don't have to tie off the ladder but you do have to ensure that the ladder cannot be accidentally moved or displaced. Tying off the top or bottom of a ladder is one way to ensure that it cannot be accidentally moved or displaced.
- **Standard stepladders (self-supporting).** The standard stepladder has flat steps and a hinged back. It is self-supporting and nonadjustable. Standard stepladders should be used only on surfaces that have a firm, level footing such as floors, platforms, and slabs. They're available in aluminum, wood, or reinforced fiberglass and are intended to support only one worker at a time. Remember not to stand on the top step. Stepladders

must have metal spreaders or locking arms and can't be longer than 20 feet, measured along the front edge of the side rails.

- a) **Can I use a standard stepladder like a straight ladder?** Using a standard stepladder in a closed position is not a safe practice because it's more likely to slip on surfaces such as concrete and wood than a straight ladder. Standard stepladders are designed to be used only when the spreader arms are open and locked. If a standard stepladder doesn't meet your needs, choose an appropriate straight ladder or a combination ladder.
- Other types of stepladders include:
    - a) **Two-way stepladder.** The two-way stepladder is similar to the standard stepladder; however, each side of this ladder has a set of steps. One person can work from either side or two people can work from the ladder at the same time — one on each side.
    - b) **Platform ladder.** The platform ladder is a special-purpose ladder that has a large, stable work platform. The ladder's length is determined by the length of the front edge of the side rail from the bottom of the ladder to the base of the platform; it can't exceed 20 feet.
    - c) **Orchard ladder.** The orchard ladder is a special-purpose ladder for pruning and harvest work. It has a flared base and a single back leg that offers support on soft, uneven ground. Orchard ladders are intended for use by only one person at a time and can't be longer than 16 feet. Wood, aluminum, and reinforced fiberglass versions are available. A more rigid orchard ladder, the so-called double base version, incorporates a triangular box brace with stub rails attached to the bottom step. The ladder is available in wood or with a combination wood or fiberglass rail and metal step. Maximum length is 16 feet and it is intended for use by one person. Do not stand on the top step of an orchard ladder.
      - I. **Can orchard ladders be used on construction sites?** Yes. In fact, orchard ladders are often safer on uneven or sloped ground than conventional stepladders. An orchard ladder is designed to be used on soil or turf so that each leg slightly penetrates the ground. Orchard ladders should never be used on concrete or hard surfaces. **Tripod ladders** that have spreader braces — also called electrician's ladders — are common on construction sites, too.
    - d) **Trestle ladder.** A trestle ladder is a self-supporting portable ladder that has two sections hinged at the top, forming equal angles with the base. A variation of the trestle ladder, the extension trestle ladder includes a vertically adjustable single ladder that can be locked in place. (The single extension section must lap at least 3 feet into the base section.) Trestle ladders are used in pairs to support planks or staging. The rungs are not intended to be used as steps. The angle of spread between open front and back legs must be 5½ inches per foot of length. The length can't be more than 20 feet, measured along the front edge of the side rails. Rails must be beveled at the top and have metal hinges to prevent spreading. Metal spreaders or locking devices are required to keep the rails in place.

- e) **Combination ladders and multipurpose ladders.** These ladders share many of the features of stepladders and extension ladders. Most quickly convert from standard stepladders to extension ladders, and many can be used in three or more variations — such as a stairway ladder, two-way stepladder, or a self-supporting scaffold base.
- Determine the proper length.
  - a) **Standard stepladders.** You should be able to reach about 4 feet above the top of the ladder when you're standing two steps down from the top. For example, you should be able to reach an 8-foot ceiling on a 4-foot ladder. Never use the top of a stepladder as a step.
  - b) **Extension ladders.** The total length of an extension ladder should be 7-10 feet longer than the vertical distance to the upper contact point on the structure — a wall or roofline, for example. Never stand on the ladder rungs that extend above a roofline.

- Determine the duty rating.

Manufacturers give ladders duty ratings, based on the maximum weight they can safely support. The worker's weight plus the weight of any tools and materials that are carried onto the ladder must be less than the duty rating. Before you purchase a ladder consider the maximum weight it will support. Don't subject it to a load greater than its duty rating. Duty ratings for portable ladders:

- a) Special duty (IAA) 375 pounds
  - b) Extra heavy duty (I-A) 300 pounds
  - c) Heavy duty (I) 250 pounds
  - d) Medium duty (II) 225 pounds
  - e) Light duty (III) 200 pounds
- Determine the right material.
    - a) **Wood.** Wood provides a natural feel and good insulation against heat and cold. However, untreated wood ages quickly; wood ladders need a protective coat of clear varnish to keep the wood from drying and splitting. Also, wood ladders are heavy, particularly longer ones.
    - b) **Aluminum.** Aluminum ladders are lightweight and corrosion resistant. Aluminum will not crack or chip with rough handling; however, aluminum doesn't insulate well against heat and conducts electricity. Never use aluminum ladders for work near energized electrical lines.

- c) **Fiberglass.** Fiberglass is durable, weather resistant, and nonconductive when clean and dry. Unlike wood, fiberglass won't dry out or split and provides better insulation against heat than aluminum. However, fiberglass ladders are heavier than comparable aluminum or wood ladders and can chip or crack with improper handling.

Fiberglass ladders must also be handled and maintained with more care than wood ladders. After a few years, the reinforcing fibers in fiberglass rails may become exposed, resulting in a condition known as "fiber bloom." High humidity and exposure to strong sunlight can accelerate the condition. Fiber bloom doesn't affect a ladder's strength but it will affect the appearance and may cause users mild discomfort if exposed fibers penetrate their skin. Regular washing and waxing with a commercial non-slip paste wax will protect the ladder and reduce the potential for fiber bloom. Periodically coating the ladder with acrylic lacquer or polyurethane also will protect it.

## B. How to set up your ladder

- Setting up the ladder.
  - a) Move the ladder near your work. Get help if the ladder is too heavy to handle alone.
  - b) Lock the spreaders on a stepladder. Secure the lock assembly on extension ladders.
  - c) Make sure there are no electrical wires overhead.
  - d) Use traffic cones or other barriers to protect the base of the ladder if vehicles or pedestrians could strike it.
  - e) Make sure that a non-self-supporting ladder extends at least 3 feet above the top support point for access to a roof or other work level. Do not step on rungs above the upper support.
  - f) Angle non-self-supporting ladders properly. The length of the side rails from the ladder's base to the top support points (the working length) should be four times the distance from ladder's base to the structure (the set-back distance). Done correctly, this results in a 4:1 set-up angle.
- Achieving a 4:1 set-up angle.

A non-self-supporting ladder should have a set-up angle of about 75 degrees — a 4:1 ratio of the ladder's working length to set-back distance.

Here's how to achieve it: Stand at the base of the ladder with your toes touching the rails. Extend your arms straight out in front of you. If the tips of your fingers just touch the rung nearest your shoulder level, the angle of your ladder has a 4:1 ratio.

- Five steps for setting up an extension ladder.

- a) The ladder should be closed. Position the ladder with the base section on top of the fly section. Block the bottom of the ladder against the base of the structure.
- b) Make sure there is clearance and no electrical lines are overhead. Carefully “walk” the ladder up until it is vertical. Keep your knees bent slightly and your back straight.
- c) Firmly grip the ladder, keep it vertical, and carefully move back from the structure about one quarter the distance of the ladder’s working length. This allows you to place it at the correct angle against the structure.
- d) Raise the fly section. After the bottom rung of the fly section clears the bottom rung of the base section, place one foot on the base rung for secure footing.
- e) Lean the ladder against the structure. The distance from the base of the ladder to the structure should be one quarter the distance of the ladder’s working length. Make sure the ladder extends 3 feet above the top support points for access to a roof or other work level. Both rails should rest firmly and securely against the structure.

### **C. How to work safely on your ladder.**

- Wear shoes that have non-slip soles; make sure they are free of mud, oil, or anything else slippery.
- Climb facing the ladder. Center your body between the rails and keep your hips square to the rungs. Hold the side rails with both hands; you have a better chance of avoiding a fall if a rung or step fails.
- Hold the ladder with one hand and work with the other hand whenever possible.
- Attach light, compact tools or materials to the ladder or to yourself.
- Raise and lower heavy, awkward loads with a hand line or a hoist.
- Use extreme caution when you’re pushing or pulling materials.

### **D. How to inspect your ladder.**

Neglected ladders quickly become unsafe ladders. Step bolts loosen, sockets and other joints work loose, and eventually the ladder becomes unstable. Periodic maintenance extends a ladder’s life and saves replacement costs. Maintenance includes regular inspection, repairing damage, and tightening step bolts and other fastenings.

- Inspect your ladder each time you use it. (A competent person must periodically inspect ladders for defects and after any occurrence that could make them unsafe.)
- Replace lower steps on wooden ladders when one-fourth of the step surface is worn away. Typically, the center of a step receives the most wear. Mineral abrasive or other skid-resistant material reduces wear.

- Don't paint wood ladders; paint conceals defects.
- Clean and lightly lubricate moving parts such as spreader bars, hinges, locks, and pulleys.
- Inspect and replace damaged or worn components and labels according to the manufacturer's instructions.
- Inspect the rails of fiberglass ladders for weathering, fiber bloom, and cracks.
- Keep the ladder away from heat sources and corrosive materials

#### **E. How to store your ladder.**

You'll extend a ladder's life by storing it properly:

- Use a well-ventilated storage area.
- Store wood and fiberglass away from excessive moisture, heat, and sunlight.
- Keep them away from stoves, steam pipes, or radiators.
- Store non-self-supporting ladders in flat racks or on wall brackets that will prevent them from sagging.
- Secure them so that they won't tip over if they are struck.
- Keep material off ladders while they are stored.

#### **F. How to transport your ladder.**

When you carry a ladder, keep the front end elevated, especially around blind corners, in aisles, and through doorways. You'll reduce the chance of striking another person with the front of the ladder.

When you transport a ladder in a truck or a trailer, make sure that it's properly supported parallel to the bed. Pad the support points with soft, nonabrasive material such as rubber or carpeting and tie the ladder securely to eliminate chafing and road shock.

#### **G. Safe practices checklist.**

- When portable ladders are used for access to an upper landing, the side rails extend at least 3 feet above the upper landing. When this is not possible, the ladder is secured to a rigid support at its top and a grab rail is available to help employees get off the ladder.
- Ladders are free of oil, grease, and other hazards that could cause slips.
- Ladders are not loaded beyond the manufacturer's duty rating.
- Ladders are used only for the purpose for which they were designed.

- Extension ladders are placed so that the working length of the ladder is four times the horizontal distance from the ladder's base to the structure — a 4:1 ratio.
- Ladders are used on stable, level surfaces or they are secured so that they cannot be displaced.
- Ladders are not used on slippery surfaces unless they are secured or they have slip-resistant feet.
- All ladders, except stepladders, have non-slip safety feet.
- Employees are prohibited from placing ladders on boxes, barrels, and other unstable objects.
- Ladders used near passageways, doorways, or driveways are protected so that vehicles or pedestrians do not strike them.
- The area around the top and bottom of a ladder is free from slipping and tripping hazards.
- The top of a non-self-supporting ladder is placed so that both rails are supported equally.
- Ladders are not moved, shifted, or extended when they are occupied.
- Ladders that could contact exposed energized electrical equipment have nonconductive side rails.
- Portable aluminum ladders have legible signs reading "CAUTION: Do Not Use Around Electrical Equipment" or equivalent wording.
- The top step of a stepladder is not used as a step.
- Cross bracing on the rear section of a stepladder is not used for climbing unless the ladder is designed for that purpose.
- Employees are prohibited from using ladders that are missing steps, rungs, cleats, or have broken side rails or other faulty parts.
- A competent person inspects ladders periodically for defects and after any occurrence that could damage them.
- Defective ladders are marked as defective, or are tagged "Do Not Use" and removed from service until they are repaired.
- Repaired ladders meet their original design criteria before they are returned to service.
- Employees face ladders while climbing or descending.
- Employees use at least one hand to grasp the ladder when they are climbing and descending.

- Employees do not carry objects or loads that could cause them to lose their balance.
- Employees who use ladders receive training by a competent person in proper use, placement, and handling.
- Employees know the hazards associated with ladder use and follow procedures that minimize the hazards.
- Retraining is provided periodically to ensure that employees maintain their knowledge of proper ladder use, placement, and handling.

#### H. OR-OSHA requirements for portable ladders.

- General Industry 2/D - Walking-working surfaces  
437-002-0026 Portable Ladders
- Ladder requirements frequently cited by Oregon OSHA  
1926.1053(b) (1), Portable ladders do not extend 3 feet above an upper landing.  
1926.1053(b) (4), Ladders not used for their designed purpose.  
1926.1053(b) (13), Top of ladder may not be used as a step.
- LADDER REGS
  - a) 437-002-0026(5)(a-h)
    - I. (a) Step spacing must be uniform and not more than 12 inches. Steps must be parallel and level when the ladder is in the normal use position.
    - II. (b) All joints, attachments and working parts of ladders must be tight and not worn to a point that causes a hazard. Do not use ladders with damaged or bent parts.
    - III. (c) Replace frayed or badly worn rope.
    - IV. (d) Safety feet and other auxiliary equipment must in good condition.
    - V. (e) Inspect ladders and remove from use any with defects. Ladders awaiting repair must be tagged, "Dangerous, Do Not Use."
    - VI. (f) There can be no dents, breaks or bends in the side rails or rungs;
    - VII. (g) Do not make ladders by fastening cleats across a single rail.
    - VIII. (h) Portable ladders must have non-slip bases.
  - b) 437-002-0026(7)(h)(A-C)

- I. (h) Secure ladders as necessary when used on surfaces that may allow slipping or movement. Use one of the following methods:
- II. (A) non-slip bases on the ladder feet; or,
- III. (B) steel points or safety shoes on the ladder feet, designed for the type of surface the ladder is on; or
- IV. (C) nail the ladder to the floor, or set it against secured blocks or chocks.

## I. Definitions.

1. **Check-** A lengthwise separation of the wood that occurs across the rings of annual growth.
2. **Cleat-** A rectangular ladder crosspiece placed on edge, upon which a person may step while ascending or descending.
3. **Competent person-**One who can identify existing and predictable hazards where employees work and who can take prompt corrective measures to eliminate the hazards.
4. **Decay-** Disintegration due to action of wood-destroying fungi. Also known as dote or rot.
5. **Extension ladder-** A non-self-supporting portable ladder that is adjustable in length. It consists of two or more sections in guides or brackets that permit length adjustment. Length is designated by the sum of the lengths of each section, measured along the side rails.
6. **Extension trestle-** A self-supporting portable ladder that is adjustable in **ladder** length, consisting of a trestle ladder base and a vertically adjustable single ladder with means for locking the ladders together. Length is designated by the length of the trestle ladder base.
7. **Fastening-** A device that attaches a ladder to a structure, building, or equipment.
8. **Platform ladder-** A self-supporting ladder of fixed size with a platform at the working level.
9. **Rungs-** Ladder crosspieces on which a person steps when ascending or descending.
10. **Sectional ladder-** A non-self-supporting portable ladder, nonadjustable in length, consisting of two or more sections that function as a single ladder. Its length is designated by the overall length of the assembled sections.
11. **Single (or straight) -** A single section non-self-supporting portable ladder, **ladder** nonadjustable in length. Its length is measured along a side rail.
12. **Special-purpose-** A general-purpose portable ladder with modified **ladder** features for specific uses.

13. **Stepladder**- A self-supporting portable ladder, nonadjustable in length that has flat steps and a hinged back. Length is measured along the front edge of a side rail.
14. **Steps**- The flat crosspieces of a ladder on which a person steps when ascending or descending.
15. **Tread**- The horizontal member of a step.
16. **Tread width**- The horizontal distance from front to back of the tread, including nosing.
17. **Trestle ladder**- A self-supporting portable ladder, nonadjustable in length that consists of two sections hinged at the top to form equal angles with the base. Length is measured along the front edge of a side rail.



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If yes, preserve the evidence and identify:

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Was the accident caused by another person not employed by this organization?

Yes \_\_\_\_\_ No \_\_\_\_\_

Name: \_\_\_\_\_

Address \_\_\_\_\_

Was a previous injury or condition of the employee a contributing factor?

Yes \_\_\_\_\_ No \_\_\_\_\_ If yes, explain:

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Is there a reason to question whether this is a job related injury?

Yes \_\_\_\_\_ No \_\_\_\_\_

What corrective action was taken, or is planned, to prevent similar accidents from occurring in the future?

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Draw a sketch of the details on the back of this report or attach a photo.

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SUPERVISOR'S NAME

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TITLE

---

DATE

For additional comments, please use reverse side.

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**City of North Plains  
Accident Investigation Check List**

(Please use this list as a way to verify that you have completed all parts of this accident investigation form that pertain to this occupational accident/illness)

**Minor Injury Investigation**

**Documentation**

- \_\_\_ Time and date of injury
- \_\_\_ Date notified supervisor
- \_\_\_ Time and date left work
- \_\_\_ Time lost from work

**Worker Name**

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- \_\_\_ Home address and phone number
- \_\_\_ Job title
- \_\_\_ Length of employment
- \_\_\_ Department
- \_\_\_ Job description

**Information from Witnesses**

- \_\_\_ How supervised
- \_\_\_ Personal protective equipment
- \_\_\_ Body part injured
- \_\_\_ Previous Injury to this part of body
- \_\_\_ Nature of injury (strain, cut, bruise)
- \_\_\_ Department where injury occurred

**Employer**

- \_\_\_ Location where worker records are kept
- \_\_\_ Safety training relating to equipment involved in accident

**Serious Injury Investigation**

**Scene**

- \_\_\_ Diagram
- \_\_\_ Photos
- \_\_\_ Measurements
- \_\_\_ Time and date returned to work

**Equipment and Site Layout of Operation**

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- \_\_\_ General condition
- \_\_\_ Make, serial, and model
- \_\_\_ Manufacturer's information
- \_\_\_ Maintenance information and records
- \_\_\_ Suitability and adequacy of equipment
- \_\_\_ Witness Name
- \_\_\_ Witness address and phone number
- \_\_\_ Recollection of accident (done at scene)
- \_\_\_ One on one interview with witness



citycounty insurance services  
www.cisoregon.org

# City of North Plains Employee Accident/Incident Report

*All overnight hospitalizations must be reported to OR-OSHA within 24 hours. Any fatality or catastrophes involving 3 or more hospitalizations must be reported within 8 hours. Contact OR-OSHA at (800) 922-2689.*

PLEASE COMPLETE ALL OF THE FOLLOWING INFORMATION:

Employee Name: \_\_\_\_\_ Incident RPT #: \_\_\_\_\_  
Dept: \_\_\_\_\_ Job Title: \_\_\_\_\_

### To Be Completed By Employee:

(Attach second page if more space is required)

When did the Incident Occur? Date: \_\_\_\_\_ Time: \_\_\_\_\_  a.m.  p.m.

Accident/Incident Location: \_\_\_\_\_

When was Incident Reported?: Date \_\_\_\_\_ To Whom : \_\_\_\_\_

**Witnesses Information:**

Witness #1 (Name, Phone): \_\_\_\_\_

Witness #2 (Name, Phone): \_\_\_\_\_

List all Parts of the Body Affected: \_\_\_\_\_  Left side  Right side

Type of Injury/Illness/Exposure: (i.e. strain, cut): \_\_\_\_\_

What were you doing just before the Incident occurred? \_\_\_\_\_

Describe what happened (include sequence of events; equipment, materials, and substances being used; and environment – PLEASE BE SPECIFIC): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Was the Incident caused by defective equipment, another person, or during training?  Yes  No

If yes, equipment info, name of person (suspect) or instructor name: \_\_\_\_\_

Reporting information (If known and applicable): Vehicle #: \_\_\_\_\_ Case#: \_\_\_\_\_

Have you injured this part(s) of your body previously or is there any pre-existing condition that could affect the injury? Yes \_\_\_\_\_ No \_\_\_\_\_ (if yes, please explain): \_\_\_\_\_  
\_\_\_\_\_

What do you think can be done to prevent this Incident from reoccurring? \_\_\_\_\_  
\_\_\_\_\_

*If seeking medical attention or unable to return-to-work, complete form 801 (Report of Job or Illness for Workers' Compensation Claim).*

Employee's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**To Be Completed By Employee's Site Supervisor:**

**What was the Root Cause of this Incident?**

Lack of Training  Supervision  Rule Enforcement  Maintenance  Other \_\_\_\_\_

**What was the Surface Cause of this Incident?**

Unguarded Machine  Broken Tools  Defective PPE  Horseplay  Fails to Enforce  
 Other \_\_\_\_\_

**Did worker report incident within 24 hours?**  Yes  No

**Supervisor Review of Incident and Findings:** \_\_\_\_\_

**What could have been done, or should be done, to prevent this accident/incident?:** \_\_\_\_\_

**Site Supervisor's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Department Head Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Safety Committee Evaluation of Accident/Incident:**

**Corrective Action Needed:** \_\_\_\_\_

**Committee Recommendations:** \_\_\_\_\_

**Estimated cost:** \$ \_\_\_\_\_

**Safety Committee Chair Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Administrator Signature of Approval:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Comments:** \_\_\_\_\_

**Safety Committee Follow-up:**

**Corrective Action Assigned To (if applicable):** \_\_\_\_\_

**Date Completed:** \_\_\_\_\_

**City of North Plains**  
**Blood borne Pathogen Exposure Incident/Accident Report**

• Immediate supervisor should complete this form promptly with employee input.

• Please print clearly and forward to the Supervisor

1. \_\_\_\_\_ 2. \_\_\_\_\_  
Employee Supervisor

3. \_\_\_\_\_ 4. \_\_\_\_\_  
Date of Incident/Accident Time

5. \_\_\_\_\_  
Incident/Accident Location and case number (if applicable)

6. Describe the Incident Fully (route of exposure, circumstances; describe type of controls in place at time of incident including engineering controls and personal protective equipment worn; identify unsafe conditions and/or actions; relevant police reports).

7. Describe employee's injury (part of the body/type of injury):  
\_\_\_\_\_

8. Describe first aid/medical treatment (when and by whom):  
\_\_\_\_\_

9. When was the accident reported: \_\_\_\_\_ To whom?: \_\_\_\_\_ If not immediately reported, WHY? \_\_\_\_\_

10. List Names of Witnesses: \_\_\_\_\_

11. Is the source individual known? Yes \_\_\_ No \_\_\_, if so please provide name/address so that consent for blood testing can be obtained.

Name: \_\_\_\_\_ Address: \_\_\_\_\_

12. What corrective action was taken or is planned, to prevent similar accidents from occurring in the future? \_\_\_\_\_

13. Referral to medical evaluator has been done? Yes \_\_\_ No \_\_\_ Date: \_\_\_\_\_  
If not explain: \_\_\_\_\_

**NOTE: THE OREGON HEALTH DIVISION "SOURCE CONSENT" FORM WILL BE SENT TO THE SOURCE OR HIS/HER MEDICAL PROVIDER TO ATTEMPT TO OBTAIN PERMISSION FOR SOURCE HIV/HBV BLOOD TESTING. THE MEDICAL EVALUATOR HAS BEEN INFORMED AS TO OUR POLICY AND THE OR-OSHA RULES. ALL MEDICAL DATA IS CONFIDENTIAL.**

NAME OF INVESTIGATOR: \_\_\_\_\_

TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

For additional comments please use additional paper

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**HEALTHCARE PROFESSIONAL'S WRITTEN OPINION FOR POST-EXPOSURE EVALUATION AND FOLLOW-UP**

**DIRECTIONS:** This form needs to be filled out by the healthcare professional following an exposure incident and returned to the employer. The employer will maintain a copy of this form PLUS give the exposed employee a copy within 15 days.

(Y/N) The employee has been informed of the results of the evaluation.

(Y/N) The employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

HEALTHCARE PROVIDER'S SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

The blood or body-fluid source individual shall be asked to consent to having their blood collected and tested for HBV and HIV. For our clients under 18 years of age, if they are the source individual, their legal guardian will be asked to give consent for testing. The following information must be recorded:

NAME: \_\_\_\_\_

BLOOD TAKEN: (Y/N)

DATE TAKEN: \_\_\_\_\_

WRITTEN/ORAL CONSENT GIVEN FOR: (Y/N) \_\_\_\_\_ HBV TESTING

WRITTEN/ORAL CONSENT GIVEN FOR: (Y/N) \_\_\_\_\_ HIV TESTING

RESULTS MADE AVAILABLE TO THE EMPLOYEE: (Y/N) \_\_\_\_\_

DATE MADE AVAILABLE: \_\_\_\_\_

NAME OF MEDICAL CENTER AND TREATING PHYSICIAN: \_\_\_\_\_

**EMPLOYEE DECLARATION DECLINING THE HEPATITIS B VACCINATION**

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

EMPLOYEE SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

SUPERVISOR: \_\_\_\_\_

DEPARTMENT MANAGER: \_\_\_\_\_