



## **PUBLIC WORKS DEPARTMENT**

# **Confined Space Program Standard Operating Policy**

## **ACCIDENT PREVENTION SAFETY COMMITTEE**

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# Entering a Confined Space

## WARNING:

**Personnel entering a confined space must carry a 4-gas detection meter, a means of communication with the attendant must be maintained and must complete an entry Permit, signed and completed by the Attendant and all entry personnel. All participants in this entry will have been trained in this procedure.**

The expected Public Works divisions requiring confined space entry:

- Wastewater Treatment
- Collections and Storm Drain
- Water

Procedure for Entry:

1. Start by notifying the Division Supervisor or designee in charge that an entry is imminent.
2. Check that the portable gas meter is properly charged and calibrated. A Competent Person in each division will be assigned the responsibility for maintaining the 4-gas meter in a ready state. Follow the manufactures recommendations for bump testing, calibration and battery replacement. If the unit does not respond as expected no entry is made.
3. Complete the entry permit and make assignment as to who will enter and who will act as the Attendant. The Attendant will not hand off this responsibility to any other employee unless the entrant(s) exits the space, at which time this procedure must be redone from this point on starting with the permit.
4. Evaluate the space to be entered to determine if the area is a confined space. Most defined areas will be marked as such but, if not, follow these guidelines:
  - Is the space large enough and so configured that an employee can bodily enter and perform assigned work?
  - Does the space have limited or restricted means for entry or exit?
  - Is the space not designed for continuous employee occupancy?
5. If LEL level is over 10% or oxygen percent is beyond permissible levels (below 19.5% or above 23.5%), leave the area immediately and remotely secure all pumps and electricity feeds to the building.

## **DANGER OR HAZARD**

Confined Space.

## HEALTH HAZARD

May contain an atmosphere that is explosive, oxygen deficient, and/or toxic, and may be immediately dangerous to life and health.

## HAZARD WARNING

No warning signs or indicators may be present.

## NOTIFICATION PROCEDURE

- Notify supervisor and obtain a confined space entry permit.
- Obtain assistance from three additional operators.

## PERSONAL PROTECTIVE EQUIPMENT

- Portable gas monitor
- Portable ventilation equipment
- Eye protection
- Hard hat
- Harness, tripod, fall protection and retrieval winch
- Rescue equipment
- Additional equipment as needed by division requirements/tasks

## RESPONSIBLE PERSON

- Competent person/entry supervisor must stand-by on the outside of the confined space and assist operator entering space.
- Two additional operators must be within sight or earshot.

## RESPONSE/ACTION

- **Do not attempt to enter a confined space to rescue someone in the confined space . If rescue cannot be made with retrieval winch/tripod, notify the Fire Department (911) immediately.**
- Determine if entry is necessary.
- Obtain confined space entry permit from supervisor.
- Obtain additional assistance and determine roles.
- Assemble personal protective equipment.
- Ventilate confined space.
- Test atmosphere of confined space.
  - Oxygen at least 19.5%.
  - Flammable range less than 10 percent of lower explosive limit (LEL).
  - Absence of toxic air contaminants.
- Do not enter if above atmospheric conditions are not met, otherwise don personal protective equipment.
- Continuously monitor atmosphere; exit confined space if atmospheric conditions are violated.
- Enter confined space and perform task. The required personal protective equipment will depend upon the hazards present and the work to be performed. In no case shall a person enter a

confined space without a harness and safety line.

- Exit confined space and secure equipment and area.
- Notify supervisor of work completion.

# CONFINED SPACE ENTRY PROGRAM

## POLICY

The City of Oak Harbor is committed to providing a safe and healthy work environment for our entire staff. In pursuit of this endeavor, the following written program and policy is in place to identify all Confined Spaces and to eliminate or control hazards associated with Confined Space entry. This policy and program is in accordance with the Washington Industrial Safety and Health Administration's (WISHA), Permit Required Confined Spaces standard, WAC 296-809.

Employees will be active participants in the development and implementation of all aspects of the City of Oak Harbor's Confined Space Entry Program.

## RESPONSIBILITIES

1. Overall Program Responsibility
  - a. The Public Works Director or designee is responsible for the overall implementation and maintenance of any written program or any certification concerning the requirements of the Confined Space Standard at our facilities and within the City of Oak Harbor's Public Works jurisdiction.
2. Confined Space Evaluation
  - a. The Operations Manager (or designee) is responsible for evaluation of the workplace to determine if any permit spaces are present.
  - b. The Operations Manager (or designee) will be responsible for determining if a CS program is required, or if the permit space can be reclassified as a non-permit space, or if alternative procedures can be used.
3. Training
  - a. The Operations Manager (or designee) is responsible for ensuring that all affected personnel are properly trained and that refresher training is given. Personnel who may be included are: any authorized entrants, attendants, entry supervisors, on-site rescue team members, and employees who may potentially enter the space.
4. Initial Contracting for Rescue Services
  - a. The Operations Manager (or designee) will ensure that rescue and emergency services have been informed of any confined spaces at City of Oak Harbor Fire Department and have been given access to the spaces for drills, training, etc.
5. Equipment
  - a. The Operations Manager (or designee) will ensure that all equipment needed for safe entry into any confined space is available and in proper working order.

## **CONFINED SPACE IDENTIFICATION**

1. The Operations Manager (or designee) has evaluated the workplace and Confined Space(s) have been determined to exist.
2. The locations(s) and hazard(s) posed by these spaces are listed below:

### **Collections/Storm Drain Division Locations**

The following addresses are sewer lift stations with wet wells:

1. 638 NE 7<sup>TH</sup> AVE
2. 980 SW UPLAND CT
3. 2330 SW ROSARIO DR
4. 1289 NE TAFTSON ST
5. 1949 NW CROSBY RD
6. 2080 NE 9<sup>TH</sup> AVE
7. 281 SE CABOT DR
8. 1561 E PIONEER WAY
  - Dry well has been designated as an alternative entry area. Phone contact is required prior to and post entry. (Wet well remain a CS)
9. 3285 SW SCENIC HEIGHTS RD
10. 1631 NE 16<sup>TH</sup> AVE
11. 3308 OLD GOLDIE RD

### **Water Division Locations**

The following addresses are meter, PRV, backflow and valve vaults:

1. AULT FIELD WATER PUMP STATION
2. QUINN'S METER VAULT AND BACKFLOW PREVENTER VAULT
3. OAK HARBOR HIGH SCHOOL METER VAULT
4. 32070 SR 20 PRV VAULT
5. 65 S OAK HARBOR STREET PRV VAULT
6. SW SCENIC HEIGHTS/SR 20 PRV VAULT
7. 360 SE MIDWAY BOULEVARD PRV VAULT
8. CITY PUBLIC WORKS SHOP FIRE BACKFLOW VAULT
9. CITY HALL FIRE BACKFLOW VAULT
10. NAVY 10" METER VAULT
11. 1320 N OAK HARBOR ROAD METER VAULT
12. 31 NW CROSBY ROAD METER VAULT
13. WEST TANK VALVE VAULT
14. WEST SIDE BOOSTER PUMP STATION CHECK VALVE VAULT
15. EAST TANK ALTITUDE VALVE VAULT
16. SW 6<sup>TH</sup> OAK HARBOR MIDDLE SCHOOL METER VAULT
17. 1040 SW KIMBALL DRIVE METER VAULT
18. 890 SW KIMBALL DRIVE METER VAULT
19. 30875 SR 20/MADRONA HEIGHTS METER VAULT
20. 191 NE ERNST STREET METER VAULT
21. 67 NE IZETT STREET NORTH WHIDBEY MIDDLE SCHOOL METER VAULT
22. 85 SE JEROME STREET METER VAULT
23. 1900 NE GOLDIE ST. PRV VAULT
24. SOUTH OF DECEPTION PASS BRIDGE 10" VALVE PIT
25. GUN CLUB ROAD/OAK HARBOR ROAD PRV VAULT

## Job Hazard Analysis

Potential hazards. The employees could be exposed to the following:

- Engulfment.
- Presence of toxic gases. Equal to or more than 10 ppm hydrogen sulfide measured as an 8-hour time-weighted average. If the presence of other toxic contaminants is suspected, specific monitoring programs will be developed.
- Presence of explosive/flammable gases. Equal to or greater than 10% of the lower flammable limit (LFL).
- Oxygen Deficiency. A concentration of oxygen in the atmosphere equal to or less than 19.5% by volume.

## **PREVENTION OF UNAUTHORIZED ENTRY**

1. If confined spaces are identified at our worksite the Operations Manager (or designee) will inform exposed or potentially exposed employees of their existence and hazards. The method(s) that will be used will be:
2. Posting of danger signs at each confined space reading:

**"Danger - Permit Required Confined Space - Do Not Enter"**

## **CONFINED SPACE (CS)**

Safe entry procedures have been developed for each confined space at the facility. These procedures specify the proper methods and equipment necessary to conduct the entry operation in a safe manner. A Job Hazard Analysis has been completed for each confined space by the Operations Manager (or designee) and they are located in the Wastewater Collections Conference Room.

## **ALTERNATIVE PROCEDURES**

The DOSH" Division of Occupational Safety and Health regulations allow confined spaces that have, as their **only** hazard, an actual or potential hazardous atmosphere to use alternative procedures for entry. These alternative procedures do not require the implementation of a full CS program. The following is a list of permit spaces at the workplace which currently qualify for alternative procedures:

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**1561 E Pioneer Way (dry well only)**

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## **PERSONNEL DUTIES AND TRAINING FOR CONFINED SPACE ENTRY OPERATIONS**

1. Entry into any CS where a permit is mandated will require a specially trained and equipped team. Each team will consist of an:
  - a. Authorized entrant(s)
  - b. Attendant
  - c. Entry supervisor
  - d. Rescue personnel

2. Each member of the team will receive initial and annual refresher training. The training will be specific for the duties of each team member and include the procedures and practices necessary to protect them from the dangers of the confined space.
3. The training program will include the duties of each team member as listed below:

### **Authorized Entrants**

1. Know the hazards associated with the confined space and their effects.
2. Properly use the equipment required for entry.
3. Maintain a continuous means of communication with the Attendant.
4. Alert the Attendant in the event of an emergency.
5. Evacuate the space if an emergency occurs.

### **Attendants**

1. Know the hazards associated with the confined space and their effects.
2. Maintain an accurate account of the authorized entrants.
3. Remain at their assigned station until relieved by another attendant or until the permit for space entry is complete.
4. Monitor conditions in and around the confined space.
5. Summon rescue and applicable medical services in the event of an emergency.
6. Perform non-entry rescue procedures.
7. Perform appropriate measures to prevent unauthorized personnel from entering the confined space.

### **Entry Supervisors**

1. Assures compliance and authorizes entry. The only person who can add names to the entry permit.
2. Know the hazards associated with the confined space and their effects.
3. Verify that the safeguards required by the permit have been implemented.
4. Verify that rescue services are available and that means for summoning them are operable.
5. Cancel the written permit and terminate work in the permitted space during entry when required. Can designate this duty to Attendant.
6. Remove personnel who are not authorized to enter the permitted space during entry operations.
7. Periodically, determine that the entry operation is being performed in a manner consistent with the requirements of the permit entry procedures and that acceptable entry conditions are maintained.

### **Rescue Personnel**

1. Must receive the training required of authorized entrants.
2. Know the proper use of all personal protective equipment and rescue equipment necessary to enable them to enter and perform rescue operations.
3. Must practice making confined space rescues at least once every twelve months.
4. Must be trained in basic First-Aid and in cardiopulmonary resuscitation (CPR). At least one member must hold current certification in First-Aid and in CPR.

5. Off-site rescue services must have access to confined spaces as necessary for those rescuers to develop an appropriate rescue plan.

### **Confined Space Program (CS) Program Training**

Members working under the confined space program require training on the following topics:

1. Types of confined space hazards.
2. Components of the written CS program.
3. Components of the entry permit system.
4. Components of the hot work permit.
5. The need for prompt guarding of the entrance opening.
6. Atmospheric testing equipment including its use, calibration, and maintenance.
7. Atmospheric testing protocol:
  - a. Oxygen, combustibles, toxins
  - b. Pre-entry, continuous testing
  - c. Check all levels of the space
8. Methods for product control and/or elimination of atmospheric hazards:
  - a. Ventilating
  - b. Draining and rinsing
  - c. Purging and cleaning
  - d. Blanking, blinding, bleeding
  - e. Lock Out/Tag Out - follow City SOP for LOTO
9. Procedures the employees must follow if they detect a hazard.
10. The evaluation process to be used for entry if hazards are detected.
11. The use of entry equipment (e.g., ladders, communication devices, etc.).
12. Personal protective equipment required:
  - a. Full body harness
  - b. Respiratory protection
    - Including half face dust masks and both full and half face negative pressure cartridge style respirators.
  - c. Chemical protective clothing
  - d. Eye and face protection
  - e. Hearing protection
  - f. Any other specific PPE necessary
13. Personnel and their responsibilities:
  - a. Authorized entrant
  - b. Attendant
  - c. Entry supervisor
  - d. Rescue team
14. On-site or Off-site rescue:
  - a. Rescue plan
  - b. Practice rescues
  - c. Basic First-Aid and cardiopulmonary resuscitation certification
  - d. Full body harness with retrieval line attached to mechanical retrieval device
15. Procedures for annual review of canceled permits.
16. Any other information necessary to ensure employee safety during a permit space entry operation.
17. Documentation of the training.

The following is a list of employees who have been equipped and trained to serve as authorized entrant attendants or entry supervisors:

Storm Drain/Wastewater Collections

Keith Jameson -Lead  
Alvin Baza  
Eph Robbins  
Kindle Sullivan  
Brad VonHaden

Water

Chris Price - Lead  
Will Jennings  
Jon Pollock

Wastewater

Phil Matthews - Lead  
Jack Robinson  
Brian Schneider

## **HOST EMPLOYER'S RESPONSIBILITIES WITH CONTRACTORS**

When contractors are involved in confined space entry work at our workplace, the Construction Inspector will inform them of the following information and coordinate entry operations:

1. The location of the confined spaces at our facility and that entry into these spaces is only allowed through a CS program or alternative procedures or space reclassification.
2. Our rationale for listing the space as a confined space, the identified hazards, and our experiences with the particular space.
3. Precautions that we have implemented to protect employees working in or near the space.
4. The Construction Inspector will debrief the contractor at the completion of the entry operations, or during if a need arises, and if any hazards were confronted or created during their work.

## **CONTRACTOR'S RESPONSIBILITIES WITH HOST EMPLOYERS**

When a contracting company is hired to perform work in a CS, the contracting company representative will obtain the following information from the host employer and ensure the following tasks are performed:

1. Obtain any information on the hazards of the confined space and information from previous entry operations from the host employer.
2. Determine if the host employer's workers will be working in or near the space.
3. If the host employer will have employees working in or near the space during our entry operation, the contractor's representative will coordinate entry operations with the host employer's representative.
4. Will inform the host employer of the confined space program that will be utilized.
5. Hold a debriefing conference at the completion of the entry operation or during the entry operation (if needed) to inform the host employer of any hazards confronted or created.

## **RESCUE AND EMERGENCY SERVICES**

1. The precautions and procedures outlined in our written CS program are designed to ensure that our employees are safe while working in confined spaces.
2. Under no circumstances are employees permitted to enter a space where hazards have not been eliminated or controlled, in order to prevent additional employees from needing rescue.
3. Additionally, we recognize that unexpected situations might arise that prevents entrants from self-rescue.
4. In response, the following rescue and emergency action plan has been developed and will be strictly enforced:
  - a. The City of Oak Harbor has decided to utilize the Fire Department for off-site entry rescue services.
  - b. Battalion Chief will ensure that each member of the firm's rescue service is appropriately trained.
  - c. Battalion Chief will ensure that each member of the rescue service will receive basic first aid and cardiopulmonary resuscitation (CPR). At least one of these members must hold current certification in first aid and CPR.

- d. Battalion Chief will ensure that rescue team members will practice rescue techniques at least annually from the actual or similarly configured space(s).
- 5. The Operations Manager (or designee) has made arrangements with Oak Harbor Fire Department for off-site rescue and emergency services and they have consented to provide this service.
- 6. The Operations Manager (or designee) has informed Oak Harbor Fire Department of the hazards they may encounter if they are summoned. The Operations Manager (or designee) has also provided access to the rescue service so they can evaluate the confined spaces to develop appropriate rescue plans and practice rescue operations. If rescue and emergency services are needed, the following procedures will go into effect:

**Name of Rescue Service:** Oak Harbor Fire Department

**Telephone Number:** 911

**Location:** 855 E Whidbey Ave, Oak Harbor, WA

**Approximate Response Time:** Five (5) minutes from time of call

**Name of Emergency Medical Service:** Oak Harbor Fire Department and/or  
Whidbey General Hospital  
Paramedic Program

**Telephone Number:** 911

**Location:** 760 NE 7<sup>th</sup> Ave, Oak Harbor, WA

**Approximate Response Time:** Five (5) Minutes from time of call

The specific procedures for summoning rescue and emergency services for our workplace are outlined as follows:

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## **TRAINING**

Training must be given to each employee who has access or potential access to a confined space. The amount and type of training needed will depend on the individual's duty assignment. For example, some employees may only be required to know the existence, location, and danger posed by a permit space. Others would need considerably more training if they are members of a CS team. Still others would need training as it pertains to the type of entry procedures used. The overall intent of this training is to give employees the understanding, knowledge, and skills necessary for the safe performance of their assigned duties in relation to the permit spaces of concern.

Four basic categories have been set up to train employees based on duties and potential exposure:

- **Awareness Training**
- **Training Required for Using Alternative Procedures**
- **Competent Person Designation**

### **Awareness Training**

Awareness training for employees potentially exposed to confined spaces can be satisfied by providing them with an overall review of our written program.

## Training Required for Using Alternative Procedures

If the space qualifies for alternative procedures, training on the following topics is warranted:

1. A major point concerning the use of alternative procedures is that these procedures can only be used when a hazardous atmosphere is the **only** hazard of concern.
2. The harm associated with the atmospheric hazards of concern including their acceptable entry levels and symptoms of overexposure.
3. Awareness training to recognize other potential hazards in or around the space.
4. Any condition which may make it unsafe to remove the entrance cover.
5. The need for prompt guarding of the entrance opening.
6. Atmospheric testing equipment including its use, method of calibration, and maintenance.
7. Atmospheric testing protocol for oxygen, combustibles, toxins.
8. Pre-entry, frequent or continuous testing of the confined space.
9. Check all levels of the space for atmospheric hazards:
  - a. Atmospheric Controls
  - b. Ventilating
  - c. Draining and rinsing
  - d. Purging
10. Continuous forced air ventilation including type, proper use and placement, and its limitations.
11. Procedures the employee must follow if a hazardous atmosphere is detected.
12. The evaluation process to be used for entry if a hazardous atmosphere is detected or the individual vacates the space and returns some time later.
13. Train employees on the use of entry equipment used including ladders and intrinsically safe lighting.
14. Personal protective equipment (e.g., gloves, hard hats, boots, etc.), its use, limitations, and required maintenance.
15. A review of the completed written certification form with the employee prior to entering the space.
16. Any process which may introduce a hazard (e.g., welding, cleaning with chemicals, solvents, etc.) which would prohibit use of alternative procedures.
17. The requirements of WAC 296-809-4002 must be reviewed with the employee.
18. Any other information needed to ensure the safety of the employee.
19. The documentation of the training.

Within one year of any entry operation, the Operations Manager (or designee) will conduct a review of the program using the canceled entry permits to identify any deficiencies in our program. A review will be conducted sooner if there is reason to believe that the program does not adequately protect our employees. Any corrective measures will be documented by a revision of the program. Employees will be trained on any changes. Additionally, employees who note any inadequacies with the program can contact the Operations Manager. If no permit required space entry operations are conducted during the year, no review is needed.

## COMPETENT PERSON DESIGNATION

An evaluation has determined that the person named below has knowledge of the systems, equipment, conditions and procedures, proper use, inspection, manufacturer's recommendations and instructions, and maintenance for the activities designated below. Consequently, this person has been designated as a "Competent Person" per OSHA guidelines and delegated the responsibility and authority for coordinating activities and operations covered by the designation(s).

**Company:** City of Oak Harbor

**Name:** \_\_\_\_\_

### Competent Person Designation(s)

**Check as appropriate:**

Confined Space Work

Lead Abatement

Aerial Lift

Ladder

Other

Excavation, Trenching and Shoring

Scaffolds

Fall Protection

Vactor

Electrical Work

Box Blade

**List other tasks:** \_\_\_\_\_

### Credentials Reviewed and Verified for Designation

Formal Training (describe, with year completed):

\_\_\_\_\_  
 Years of Experience (give number of years):

\_\_\_\_\_  
 Informal Training (describe):

\_\_\_\_\_  
 On-The-Job Performance (OJT, OJE):

**Signatures:**

\_\_\_\_\_  
Competent Person

\_\_\_\_\_  
Date

\_\_\_\_\_  
Supervisor

\_\_\_\_\_  
Date

## COMPETENT PERSON DESIGNATION FORM INSTRUCTIONS

Read the statement at the top of the Competent Person Designation Form.

### Employee Information:

Company: Write the name of the company.  
Name: Print the employee's full name.

### Competent Person Designation(s):

Check the box to indicate which area the employee is being designated as a "Competent Person." (More than one box may be checked and tasks can be added or removed)

### Credentials Reviewed and Verified for Designation:

**(Completion of this section is mandatory. Be as detailed as possible - list specifics.)**

- Review and verify the credentials of the employee.
- List any applicable formal training in the space provided.
- List the number of years of experience the employee has relevant to the Competent Person designations marked above.
- Check the appropriate box if the employee has completed a union apprenticeship.
- List any applicable informal training.
- Check the appropriate box if the designation is based on "On-The-Job" Performance.

### Standards and Practices Training:

**(Completion of this section is mandatory.)**

- Ensure the employee has read the relevant standards and practices governing the designations marked in the sections above.
- Ensure the employee fully understands the roles, responsibilities and authority he/she will be expected to execute.
- Check the box indicating which standards and practices the employee read during the designation process.

### Signatures:

- The Competent Person must sign and date the form accepting the responsibilities associated with the designations.
- The employee's foreman, general foremen, or superintendent should sign and date the form acknowledging the designation. (This signature is not mandatory.)
- The area construction manager must sign and date the form.

### BACKGROUND

1. Competent Person is a specifically defined designation from the federal OSHA standards, and **MUST NOT BE CONFUSED** with a person who is competent (proficient and/or trained) to perform a job/activity.
2. Competent Persons must be designated for the following tasks/activities:
  - Excavation, Trenching and Shoring

- Scaffold Erection and Inspection
  - Confined space entry
  - Ladder Inspection (portable)
  - Safety Monitoring
  - Aerial lift Trainer
  - Fork lift Trainer
  - Hazardous material handling
  - Fall Protection - Equipment Inspection and Trainer
  - Heavy Equipment Operation
  - Heavy Equipment Inspection
3. A Competent Person designation is predicated on an individual being exceptionally well qualified in his/her subject area, as designated by his/her division head or lead.
  4. A Competent Person must demonstrate he/she is (a) highly knowledgeable on the subject and (b) capable of using consistently good judgment in carrying out the appointed responsibilities in the subject area; one may be competent, and not be a Competent Person.
  5. We should LIMIT THE NUMBER of Competent Persons to no more than three per craft, per subject area, per project - less if possible/appropriate. An exception may be in the subject areas performed regularly.
  6. In most cases, a Competent Person should be considered Competent from one project to another.

**CONFINED SPACE PROGRAM  
STANDARD OPERATING POLICY  
TRAINING CERTIFICATION**

I have received a copy of the Confined Space Policy and have read it.

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

\_\_\_\_\_  
Employee Name (print please)

\_\_\_\_\_  
Date

I hereby certify that the above named employee has been provided with a copy of the Confined  
Space Policy on: \_\_\_\_\_ (date).

\_\_\_\_\_  
Signature