Confined Space

Potential Hazard Review

Chemical Hazards

- Inhalation: Inflammation of the lungs, respiratory failure, death

Physical Hazards

- Fire/explosion: Burns, death
- Thermal stress: Hypothermia, heat-related illness

Related Safe Work Practices

- Fire Safety
- Hazardous Substances
- Lockout and Tagout

Personal Protective Equipment

- Barriers and shields
- Communications equipment
- Lighting equipment
- Rescue and emergency equipment
- Testing and monitoring equipment
- Ventilating equipment
- Other equipment for safe entry, egress and rescue

Authority

- CCR Title 8 Section 1632, 1670, 1671, 1724, 3209, 3210, 3212, 5157

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This SWP is dedicated to helping you avoid an injury or illness from known hazards. You are advised to follow these recommendations, read and follow this SWP and any related SWPs, complete any required or recommended training, and to obtain advice from a Qualified Person if you have any questions.

All tasks require that you:

- Use the equipment in accordance with the guidelines set forth by the manufacturer. This includes following all signs and labels, and reviewing any manufacturer's operating manuals.
  - If the instructions provided in the operating manual conflict with this SWP, then follow the instructions in the manual. The manufacturer's instructions prevail over this SWP.
- Review the safety data sheets (SDSs) for each chemical.
- Be trained on this SWP and those listed above as related. Training on SWPs must be completed before initial assignment. It is also recommended that you complete refresher training every two years.

DEFINITIONS

1. Acceptable entry conditions: The conditions that shall exist in a permit space, before an employee may enter that space, to ensure that employees can safely enter into, and safely work within, the space.
2. Attendant: An individual stationed outside one or more permit spaces who assesses the status of authorized entrants. Attendants will:
   a. Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
   b. Be aware of possible behavioral effects of hazard exposure in authorized entrants.
   c. Continuously maintain an accurate count of authorized entrants in the permit space and ensure that the means used to identify authorized entrants accurately identifies who is in the permit space.
   d. Remain outside the permit space during entry operations until relieved by another attendant, unless attempting a rescue (only if the attendant has been trained and equipped for rescue operations and if relieved).
   e. Communicate with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
   f. Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:
      i. If the attendant detects a prohibited condition.
      ii. If the attendant detects the behavioral effects of hazards exposure in an authorized entrant.
      iii. If the attendant detects a situation outside the space that could endanger the authorized entrants.
      iv. If the attendant cannot effectively and safely perform all the duties.
   g. Initiate on-site rescue procedures and, if necessary, summon additional rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards;
   h. Take the following actions when unauthorized persons approach or enter a

permit space while entry is underway:
   i. Warn the unauthorized persons that they must stay away from the permit space.
   ii. Advise the unauthorized persons that they must exit immediately if they have entered the permit space.
   iii. Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space.
i. Perform non-entry rescues or other rescue services.
j. Perform no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

3. Authorized entrant: An employee authorized by the employer to enter a permit space. All authorized entrants will:
   a. Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
   b. Properly use equipment.
   c. Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required.
   d. Alert the attendant whenever:
      i. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or
      ii. The entrant detects a prohibited condition
   e. Exit from the permit space as quickly as possible whenever:
      i. An order to evacuate is given by the attendant or the entry supervisor,
      ii. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation,
      iii. The entrant detects a prohibited condition, or
      iv. An evacuation alarm is activated
4. Barrier: A physical obstruction that blocks or limits access.
5. Blanking or Blinding: The absolute closure of a pipe, line, or duct by fastening a solid plate (e.g., a spectacle blind or skillet blind) that completely covers the bore and is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.
6. Confined Space: A space that (1) is large enough and so configured that an employee can bodily enter and perform assigned work; (2) has limited or restricted means for entry or exit (e.g., tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and (3) is not designed for continuous employee occupancy. Examples of confined spaces that may exist at RPD include:
   a. Storm drainpipes
   b. Sewers
   c. Vaults (including Telecommunications Spaces)
   d. Storage tank
   e. Utility pipelines

   f. Manholes
   g. Excavations
7. Competent Person: One 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.
8. Control: The action taken to reduce the level of any hazard inside a confined space using engineering methods (for example, by ventilation), and then using these methods to maintain the reduced hazard level. Control also refers to the engineering methods used for this purpose. Personal protective equipment is not a control.
9. Double Block and Bleed: The closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.
10. Early-warning system: The method used to alert authorized entrants and attendants that an engulfment hazard may be developing. Examples of early-warning systems include, but are not limited to: alarms activated by remote sensors; and lookouts with equipment for immediately communicating with the authorized entrants and attendants.
11. Emergency: Any occurrence (including any failure of hazard control or monitoring of equipment) or internal or external event to the permit space that could endanger entrants.
12. Engulfment: The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, crushing, or suffocation.
13. Entry: The action by which any part of a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional or any work activities are actually performed in the space.
14. Entry employer: Any employer who decides that an employee it directs will enter a permit space. An employer cannot avoid the duties of the standard merely by refusing to decide whether its employees will enter a permit space, and it will be considered a failure to so decide to be an implicit decision to allow employees to enter those spaces if they are working in the proximity of the space.
15. Entry Permit: The written or printed document that is provided by the employer to allow and control entry into a permit space.
16. Entry rescue: This occurs when a rescue service enters a permit space to rescue one or more employees
17. Entry Supervisor: The person (e.g., the employer, foreman, or crew chief) responsible for supervising entry. Entry supervisors will:
   a. Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

b. Verify, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
c. Terminate the entry and cancels the permit as required.
d. Verify that rescue services are available and that the means for summoning additional services are operable.
e. Remove unauthorized individuals who enter or who attempt to enter the permit space during entry operations.
f. Determine, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

18. Hazard: A physical hazard or hazardous atmosphere
19. Hazardous Atmosphere: Hazardous atmosphere: An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:
    a. Flammable gas, vapor, or mist in excess of 10 percent of its Lower Flammable Limit (LFL);
    b. Airborne combustible dust at a concentration that meets or exceeds its LFL; this concentration may be approximated as a condition in which the combustible dust obscures vision at a distance of 5 feet or less.
    c. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
    d. Atmospheric concentration of any substance for which a dose or a Permissible Exposure Limit (PEL) is published in Cal OSHA regulations; An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this definition.
    e. Any other atmospheric condition that is immediately dangerous to life or health.
    f. For air contaminants for which Cal OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheet, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions
20. Host employer: The employer that owns or manages the property where the construction work is taking place. If the owner of the property on which the construction activity occurs has contracted with an entity for the general management of that property, and has transferred to that entity the following information:
    a. The location of each known permit space;
    b. The hazards or potential hazards in each space or the reason it is a permit space; and

c. Any precautions that the host employer or any previous controlling contractor or entry employer implemented for the protection of employees in the permit space.
d. Cal OSHA will treat the contracted management entity as the host employer for as long as that entity manages the property. Otherwise, Cal OSHA will treat the owner of the property as the host employer. In no case will there be more than one host employer.

21. Hot-Work: Operations capable of providing a source of ignition (for example, riveting, welding, cutting, burning, and heating).
22. Immediately Dangerous to Life or Health: Any condition that would interfere with an individual's ability to escape unaided from a permit space and that poses a threat to life or that would cause irreversible adverse health effects. Some materials - hydrogen fluoride gas and cadmium vapor, for example -may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" after recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be IDLH.
23. Inerting: Displacing the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible. This procedure produces an IDLH oxygen-deficient atmosphere.
24. Isolate or isolation: The process by which employees in a confined space are completely protected against the release of energy and material into the space, and contact with a physical hazard, by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; blocking or disconnecting all mechanical linkages; or placement of barriers to eliminate the potential for employee contact with a physical hazard.
25. Limited or restricted means for entry or exit: A condition that has a potential to impede an employee's movement into or out of a confined space. Such conditions include, but are not limited to, trip hazards, poor illumination, slippery floors, inclining surfaces and ladders.
26. Lockout: The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
27. Lower Flammable Limit (LFL) or Lower Explosive Limit (LEL): The minimum concentration of a substance in air needed for an ignition source to cause a flame or explosion.
28. Monitor or monitoring: The process used to identify and evaluate the hazards after an authorized entrant enters the space. This is a process of checking for changes that is performed in a periodic or continuous manner after the completion of the initial testing or evaluation of that space.

29. Non-entry rescue occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space.
30. Non-permit confined space: A confined space that meets the definition of a confined space but does not meet the requirements for a permit-required confined space, as defined by OSHA.
31. Oxygen-Deficient Atmosphere: An atmosphere containing less than 19.5% oxygen by volume.
32. Oxygen-Enriched Atmosphere: An atmosphere containing more than 23.5% oxygen by volume.
33. Permit-required confined space (permit space): A confined space that has one or more of the following characteristics: (1) Contains or has a potential to contain a hazardous atmosphere; (2) Contains a material that has the potential for engulfing an entrant; (3) 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; or (4) Contains any other recognized serious safety or health hazard
34. Permit-required confined space (permit space): A confined space that has one or more of the following characteristics: (1) Contains or has a potential to contain a hazardous atmosphere; (2) Contains a material that has the potential for engulfing an entrant; (3) 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; or (4) Contains any other recognized serious safety or health hazard.
35. Permit System: The written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.
36. Permit-required confined space program: The employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.
37. Physical hazard: An existing or potential hazard that can cause death or serious physical damage. Examples include, but are not limited to: explosives; mechanical, electrical, hydraulic and pneumatic energy; radiation; temperature extremes; engulfment; noise; and inwardly converging surfaces. Physical hazard also includes chemicals that can cause death or serious physical damage through skin or eye contact (rather than through inhalation).
38. Prohibited condition: Any condition in a permit space that is not allowed by the permit during the period when entry is authorized. A hazardous atmosphere is a prohibited condition unless the employer can demonstrate that Personal Protective Equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee.
39. Qualified person: One who, by possession of a recognized degree, certificate, or professional standing, or who 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.

40. Representative permit space: A mock-up of a confined space that has entrance openings that are similar to, and is of similar size, configuration, and accessibility to, the permit space that authorized entrants enter.
41. Prohibited condition: Any condition in a permit space that is not allowed by the permit during the period when entry is authorized. A hazardous atmosphere is a prohibited condition unless the employer can demonstrate that Personal Protective Equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee.
42. Rescue: Retrieving, and providing medical assistance to, one or more employees who are in a permit space.
43. Rescue Service: The personnel designated to rescue employees from permit spaces.
44. Retrieval System: The equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.
45. Serious physical damage: An impairment or illness in which a body part is made functionally useless or is substantially reduced in efficiency. Such impairment or illness may be permanent or temporary and includes, but is not limited to, loss of consciousness, disorientation, or other immediate and substantial reduction in mental efficiency. Injuries involving such impairment would usually require treatment by a physician or other licensed health-care professional.
46. Tagout: Placement of a tagout device on equipment that has been deenergized, in accordance with an established procedure, to indicate that the circuit or equipment being controlled may not be operated until the tagout device is removed. The tagout must provide equivalent protection to lockout, or lockout must be infeasible and stored (residual) energy has been relieved, disconnected, restrained and otherwise rendered safe.
47. Testing: The process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space. Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.
48. Ventilate or ventilation: Controlling a hazardous atmosphere using continuous forced-air mechanical systems.

TRAINING

49. Training shall be provided to ensure that the employee possesses the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this standard. This training shall result in an understanding of the hazards in the permit space and the methods used to isolate, control or in other ways protect employees from these hazards, and for those employees not authorized to perform entry rescues, in the dangers of attempting such rescues.
50. Training shall be provided to each affected employee:
    a. In both a language and vocabulary that the employee can understand;

b. Before the employee is first assigned duties;
c. Before there is a change in assigned duties;
d. Whenever there is a change in permit space entry operations that presents a hazard about which an employee has not previously been trained; and
e. Whenever there is any evidence of a deviation from the permit space entry procedures or there are inadequacies in the employee's knowledge or use of these procedures.
f. The employer shall maintain training records to show that the training has been accomplished. The training records shall contain each employee's name, the name of the trainers, and the dates of training. The documentation shall be available for inspection by employees and their authorized representatives, for the period of time the employee is employed.

51. Rescue training will be conducted annually.
52. Refresher training for entrant and attendant and entry supervisor be done at least once every 3 years.

IDENTIFICATION

53. Before beginning work, a competent person shall identify all confined spaces in which employees may work, and identify each space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary.
    a. Check the list of identified Permit Required Confined Spaces in this SWP.
    b. If the space is not on the list of Permit Required Confined Spaces, complete the Confined Space Evaluation Form to determine if a permit for entry is required.
54. If the workplace contains one or more permit spaces, the exposed employees shall be informed by posting danger signs or by any other equally effective means, of the existence and location of, and the danger posed by, each permit space; A sign reading “DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER” or using other similar language would satisfy the requirement for a sign.
55. Contractors shall also be notified of the existence and location of, and the danger posed by, each permit space in a timely manner and in a manner other than posting.
56. If employees and other employees performing work in the area will not enter permit spaces, effective measures will be taken to prevent all such employees from entering the permit spaces.

NON- PERMIT REQUIRED ENTRY

57. If a permit is not required, then proceed with the task in accordance with other SWPs needed to complete the assignment without injury or illness.

PERMIT REQUIRED ENTRY

58. Before entry is authorized a Confined Space Entry Permit shall be completed and the entry supervisor identified on the permit shall sign the entry permit to authorize

entry. The Confined Space Entry Permit contains all elements as required by Cal OSHA.

a. The completed permit shall be made available at the time of entry to all authorized entrants or their authorized representatives, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations have been completed.
b. The duration of the permit may not exceed the time required to complete the assigned task of job identified on the permit
c. The entry supervisor shall terminate entry and cancel the entry permit when:
   i. The entry operations covered by the entry permit have been completed; or
   ii. A condition that is not allowed under the entry permit arises in or near the permit space.
d. Each canceled entry permit shall be retained for at least 1 year to facilitate the review of the permit space program. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.

59. Provide pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards.
60. Remove the entrance cover.
    a. Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.
    b. When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space.
61. Test the internal atmosphere with a calibrated direct-reading instrument, for the following conditions in the order given:
    a. Oxygen content;
    b. Flammable gases and vapors, and
    c. Potential toxic air contaminants.
62. There may be no hazardous atmosphere within the space whenever any employee is inside the space.
63. Continuous forced air ventilation shall be used, as follows:
    a. An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere.
    b. The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space.
    c. The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.
64. The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere.

65. If a hazardous atmosphere is detected during entry:
    a. Each employee shall leave the space immediately.
    b. The space shall be evaluated to determine how the hazardous atmosphere developed.
    c. Measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.
66. Develop and implement procedures to coordinate entry operations when employees of more than one employer are working simultaneously as authorized entrants in a permit space, so that employees do not endanger each other.
67. Provide the equipment at no cost to each employee, maintain that equipment properly, and ensure that each employee uses that equipment properly.
68. Provide an early-warning system that continuously monitors for non-isolated engulfment hazards. The system shall alert authorized entrants and attendants in sufficient time for the authorized entrants to safely exit the space.
69. Evaluate the permit space in the presence of any authorized entrant or that employee's authorized representative who requests that the employer conduct such reevaluation because there is some indication that the evaluation of that space may not have been adequate; and immediately provide each authorized entrant or that employee's authorized representative with the results of any testing conducted.
70. Review entry operations when the measures taken under the permit space program may not protect employees and revise the program to correct deficiencies found to exist before subsequent entries are authorized. Examples of circumstances requiring the review of the permit space program include, but are not limited to: any unauthorized entry of a permit space, the detection of a permit space hazard not covered by the permit, the detection of a condition prohibited by the permit, the occurrence of an injury or near-miss during entry, a change in the use or configuration of a permit space, and employee complaints about the effectiveness of the program.
71. Review the permit space program, using the canceled permits within 1 year after each entry and revise the program as necessary to ensure that employees participating in entry operations are protected from permit space hazards.

RESCUE

72. At least one standby person at the site will be trained and immediately available to perform rescue and emergency services. Each person will:
    a. Be provided with, and be trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues from permit spaces.
    b. Be trained to perform the assigned rescue duties. Each member of the rescue service shall also receive the training required of authorized entrants.
    c. Practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, manikins, or actual persons from the actual permit spaces or from representative permit

spaces. Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed.

d. Be trained in basic first-aid and in cardiopulmonary resuscitation (CPR). At least one member of the rescue service holding current certification in first aid and in CPR shall be available.

73. Use the optional Confined Space Rescue Checklist as needed to assist in preparing a rescue plan (as identified on the Confined Space Entry Permit).
74. To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.
    a. Retrieval systems shall meet the following requirements:
        i. Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at a suitable point so that when rescued, the entrant presents the smallest possible profile (for example at the center of the entrant's back near shoulder level, or above the entrant's head). Wristlets may be used in lieu of the chest of full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.
        ii. The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet deep.
75. Entry rescue shall be conducted as follows:
    a. Size up the situation and implement the rescue procedures identified in the Confined Space Entry Permit.
    b. Call 911 for back up assistance.
    c. When designating rescue and emergency services, a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified shall be evaluated.
    d. If an injured entrant is exposed to a substance for which a Safety Data Sheet (SDS) or other similar written information is required to be kept at the worksite, that SDS or written information shall be made available to the medical facility treating the exposed entrant.

Permit Required Confined Spaces

Site	Confined Space
Balboa Park	Pool (During Maintenance Operations) Boiler Room Mechanical Ventilation Room crawl space Gallery crawl space
Beach Chalet	Sewer Sump
Bernal Heights Recreation Center	Auditorium attic space
Betty Ann Ong Recreation Center	Boiler Fire Box
Camp Mather	Mess Hall Sewer Sump Water Pump Water Tanks (4 50,000 gallon tanks, 5 wooden 5,000 gallon tanks) Wastewater Tank
Coffman Pool	Pool (During Maintenance Operations) Gallery crawl space
Crocker-Amazon	Sewer Sump (Under bleachers) and crawl space
Del Laveaga Dell, Golden Gate Park	Storm-water Run-off Tank Storm-water Run-off Sump Fountain Sump
Elk Glen Lake, Golden Gate Park	Booster Pump/Sump
Garfield Pool	Pool (During Maintenance Operations) Gallery crawl space
Glen Park Recreation Center	Boiler room crawl space Auditorium crawl space
Hamilton Recreation Center	Pool (During Maintenance Operations) Gallery crawl space
Harding Park Golf Course	Sumps in basement of Clubhouse (2) Elevator sump in basement of Clubhouse (2)
Kezar Pavilion	Pavilion Sump Tunnel Pump Room Utility Chase
Little Rec, Golden Gate Park	Sewer Sump (Building on side of hill off of Lincoln)
Martin Luther King Jr. Pool	Pool (During Maintenance Operations) Gallery crawl space
Mission Pool	Pool (During Maintenance Operations) Boiler Room Underground to left of staircase
North Beach Pool	Pool (During Maintenance Operations) Boiler Room
Minnie and Lovie Recreation Center	Boiler Fire Box
Palega Recreation Center	Boiler Fire Box
Palace of Fine Arts	Sewer Sump (In Theater) Electrical Switchboard Room
Pine Lake	Day Camp Building Sewer Sump
Rossi Pool	Pool (During Maintenance Operations) Gallery crawl space
Sava Pool	Pool (During Maintenance Operations) Gallery crawl space
Sharp Park	Underground Out-fall Sump Reservoir Sump Pumps Pump-house Sump Pump
Stern Grove	Parking Lot Sewer Sump Under Trocadero Building
Sunset Recreation Center	Boiler Fire Box