



LEADERS IN
ENVIRONMENTAL
PROTECTION

Leucadia Wastewater District

Fall Protection Program



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I certify the Fall Protection Program for the Leucadia Wastewater District (LWD) has been reviewed and revised as necessary.



 Paul J. Bushee, General Manager



 Date Certified

1.0 PROGRAM REVIEW AND CERTIFICATION

The Fall Protection Program (*FPP*) at the LWD will be reviewed and revised as necessary to ensure the program is current. All revisions are documented on Attachment A: Program Review and Certification Log.

2.0 PURPOSE

The FPP is designed to identify the procedures LWD employees, contractors and visitors will follow in order to prevent falls from elevated work areas, ladders, and from falling into lower levels through openings in walking/working surfaces. This Program establishes uniform requirements designed to ensure that personnel is adequately equipped and trained in safe work practices in accordance with Cal/OSHA Title 8, Sections 3209 – 3213, 3231, 3234, 3275 – 3280, 3648, 1541 and 1670.

3.0 APPLICABILITY

The following safety precautions and requirements apply to all work areas, including off-site work areas, where there is a risk of falling. It applies to all LWD employees, visitors, inspectors, contractors, and temporary employee(s) *if* performing work activities at, or above, any Cal/OSHA fall protection trigger heights (see Attachment B) and/or when exposed to fall hazards into a floor or wall opening.

4.0 DEFINITIONS

Aerial lift device - Equipment such as powered platforms, vehicle-mounted elevated and rotating work platforms, extensible boom platforms, aerial ladders, articulating boom platforms, vertical towers and powered industrial truck platforms.

Anchor point - A secure point of attachment for lifelines, lanyards or deceleration (grabbing) devices.

Body belt - A strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

Body harness (also referred as full-body harness) - An interconnected set of straps that may be secured about a person in a manner that distributes the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders with a means for attaching the harness to other components of a personal fall arrest system.

Competent person - One who is capable of identifying existing and predictable fall hazards in the workplace and has authorization to implement corrective measures.

Connector - A device that is used to couple (connect) parts of a personal fall arrest system or positioning device system together.

Deceleration device - Any mechanism, such as a rope, grabbing device, rip stitch lanyard, specially woven lanyard or automatic self-retracting lifeline/lanyard, which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limits the energy imposed on an employee during fall arrest.

Elevating work platform - A device designed to elevate a platform in a substantially vertical axis.

Extension ladder - A non-self-supporting portable ladder that is adjustable in length.

Fall protection plan - A plan required by the employee to be prepared by a qualified person when the use of a personal fall protection system is impractical or creates a greater hazard.

Fixed ladder - A ladder, including an individual rung ladder, which is permanently attached to a structure, building, or equipment.

Floor hole - Any opening in any floor or platform which is smaller than a floor opening.

Floor opening - An opening in any floor or platform, 12 inches or more in the least horizontal dimensions. It includes stairway floor openings, ladderway floor openings, hatchways, and chute floor openings.

Guardrail - A barrier erected to prevent personnel from falling from working levels more than 30 inches above the floor, ground, or other working areas of a building. A standard guardrail consists of top rail located 42-45 inches above the floor and a mid-rail.

Horizontal Lifeline - Designed, installed and used under supervision of a qualified person to support an employee working in the horizontal plane. Anchorages must be considerably stronger than those used in the vertical. Horizontal lifelines are typically located overhead to limit fall distance.

Ladder - A device typically used to gain access to a different elevation consisting of two or more structural members crossed by rungs, steps, or cleats.

Lanyard - A flexible line of rope or strap that generally has a connector at each end for connecting the body harness to a deceleration device, lifeline or anchor point.

Leading edge - The edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) that changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

Lifeline - A component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline). This serves as a means for connecting other components of a personal fall arrest system to the anchorage.

Lower levels - Those areas or surfaces to which an employee can fall. Such areas include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits tanks, material, water, equipment, structures, or portions thereof.

Personal fall arrest system - A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, and body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

Personal fall protection system - A personal fall protection system includes personal fall arrest systems, positioning device systems, fall restraint systems, safety nets and guardrails.

Personal fall restraint system - A system that restrains the worker from falling off the leading edge of a structure. Either a full-body harness or a waist belt can be used for fall restraint. A positioning belt with side D-rings can be used for fall restraint. Cal-OSHA requires the anchorage for fall restraint to support 4 times the intended load plus tools and clothing.

Positioning device system - A body harness system rigged to allow an employee to be supported on an elevated vertical surface such as a wall and work with both hands free while leaning.

Qualified person - A person who by reason of training, experience or instruction has demonstrated the ability to safely perform all assigned duties and, when required, is properly licensed in accordance with federal, state, or local laws and regulations. (8 CCR 1504).

Restraint line - A device, which is attached between the employee and an anchorage to prevent the employee from walking or falling off an elevated surface.

Safety monitor - A person that allows a worker to perform tasks on elevated surfaces and at leading edges without the use of conventional fall protection systems. The safety monitor must be trained to identify potential fall hazards, and must be in verbal and visual communication with the worker performing the leading edge work. In addition, the safety monitor can have no other responsibilities during the time that the worker is performing the leading-edge work.

Scaffold - Any temporary elevated or suspended platform, and its supporting structures, used for supporting employees or materials or both.

Self-retracting lifeline/lanyard - A deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under minimal tension during normal movement and which, after onset of a fall, automatically locks the drum and arrests the fall (usually within two feet or less).

Stairs/Stairway - A series of steps and landings having 2 or more risers leading from one level or floor to another.

Snap hook - A connector consisting of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released automatically closes to retain the object. Only locking snap hooks are permitted at LWD.

Toe board - A vertical barrier erected along the open edges of floor openings or floor holes, platforms, and runways.

Tie-Off - A procedure of connecting directly or indirectly to an anchorage point.

Unprotected sides and edges - Any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 42 inches high.

Vertical lifeline - A component consisting of a vertically hanging flexible line for connection to an anchor point at one end that serves as a means for connecting other components of a personal fall arrest system to the anchor point.

Walking/working surface - Any surface, whether horizontal or vertical, on which an employee walks or works including, but not limited to floors, roofs, ramps, bridges and, runways. Does not include ladders, vehicles, or trailers on which employees must be located to perform their work duties.

Wall opening – An opening in a wall or partition not provided with a glazed sash, having a height of at least 30 inches and a width of at least 18 inches, through which a person might fall to a level 30 inches or more below.

Warning line system - A barrier (lines/ropes/barricades/warning tape) erected on a roof or structure to warn workers that they are approaching a leading edge or unprotected side or edge.

5.0 FALL HAZARD ANALYSIS:

5.0 A fall hazard analysis has been completed for each pump station, AWT, all manholes and LWD's administration building. Fall hazards have been properly identified and appropriate engineering, administrative or personal protective equipment controls have been implemented. (Please see Attachment E)

5.1 The Field Services Supervisor will review and approve the fall hazard analysis to determine that potential fall hazards; abatement measures; fall protection equipment requirements and a rescue plan (when needed) have been addressed. If any new hazards have been identified, then a new analysis will be performed using Attachment C.

6.0 FALL PROTECTION EQUIPMENT, SYSTEMS & RESCUE:

6.1 **Fall Arrest:** If using a fall arrest system, the following shall be used as a minimum safeguard:

- **Personal fall arrest system** - A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, and body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these
- Full body harness with dorsal "D" ring
- Locking snap hook
- Suitable anchor point that will sustain a static load applied in the direction of the fall of at least 5,000 pounds. The anchor point shall not be at a level lower than the employee's waist. The anchor point shall not be a hoist unless approved for that purpose, or a guardrail.

Note: Foot level tie-off is acceptable provided the equipment is designed for the additional free fall

- A means of rescue (e.g. approved hoist, self-rescue device, etc.) for prompt rescue of employees in the event of a fall.

6.2 **Work Positioning:** If using a work positioning system, the following shall be used as a minimum safeguard:

- Full body harness with dorsal "D" ring.

- Self-Retracting lifeline or lanyard that limits free falls to 2 feet or less.
- Locking snap hook.
- Suitable anchor point that is capable of supporting two times the intended load or 3,000 pounds, whichever is greater.

6.3 Fall Restraint: If using a fall restraint system, the following shall be used as a minimum safeguard:

- **Personal fall restraint system** - A system that restrains the worker from falling off the leading edge of a structure. Either a full-body harness or a waist belt can be used for fall restraint. A positioning belt with side D-rings can be used for fall restraint. Cal-OSHA requires the anchorage for fall restraint to support 4 times the intended load plus tools and clothing.
- Full body harness with center "D" ring or a body belt that is at least one and five-eighths inches wide.
- Restraint protection (e.g. lanyard, rope) that allow for the movement of employees only as far as the sides of the working level or working area in all directions.
- Suitable anchor point that is capable of supporting 4 times the intended load.
- See OSHA Fall Protection Requirements on page 13.

6.4 Other fall protection equipment: The following includes (not limited to) other fall protection equipment devices that should be used as needed for maximum fall protection, or when required.

- Lanyards – must be secured to a substantial member of the structure or to securely rigged lines
- Connectors
- Lifelines
- Self-Retracting Lifelines

6.5 Equipment Inspections:

- 6.5.1 LWD employees will inspect personal fall protection systems prior to each use. These inspections must follow the manufacturer's guidelines for determining wear, damage and other deterioration. Defective components must be removed from service and tagged as being unusable.
- 6.5.2 A Field Services Technician will inspect all personal fall arrest systems not less than once a month and in accordance with the manufacturer's recommendations using the computerized work management system, or similar.
- 6.5.3 Defective equipment must be identified and immediately removed from service.
- 6.5.4 Any lifelines or lanyards that have been subject to impact loading must immediately be removed from service and shall not be used again for employee safeguarding.
- 6.5.5 Before using any personal protective equipment or personal fall arrest equipment each person must inspect the equipment before putting on the equipment.

6.6 Fall Rescue Plan: Prior to performing a non-routine job activity that requires the use of fall arrest, work positioning, or fall restraining systems, the Field Service Supervisor or a third-party rescue service provider shall prepare a fall rescue plan.

- 6.6.1 The fall rescue plan shall include the rescue type based on the elevated work being done, the location, and the rescue equipment available.
- 6.6.2 The fall rescue plan shall be aligned with the emergency procedures outlined in the site Emergency Action Plan.
- 6.6.3 The fall rescue plan must include procedures for assisting a worker who has fallen and is unable to rescue him/herself.
- 6.6.4 The fall rescue plan will identify equipment at the facility that could be used to help an employee

perform a self-rescue (i.e. ladders, scissors lift, aerial device, etc.).

- 6.6.5 The fall rescue plan will include language that states if self-rescue is not possible, call 911.
- 6.6.6 The Fall Protection Rescue Plan Checklist (Attachment D) will be used to document the fall rescue plan.

7.0 ELEVATED WORK AREAS & STAIRWAYS

7.1 Open-Sided Floors, Platforms, and Runways (CCR, Title 8, §3210)

- 7.1.1 **Buildings:** Unenclosed elevated work locations such as: roof openings, balconies, porches, platforms, runways, ramps, or other working levels that are **30 inches or more** above the adjacent floor or ground level shall be guarded by standard guardrails on all open sides, except where there is an entrance to a ramp, stairway, or fixed ladder.
- 7.1.2 **Other elevated locations:** The unprotected sides of an elevated work location that is not a building structure, but where employees are exposed to a fall of **4 feet or more**, must be protected with guardrails, except where there is an entrance to a ramp, stairway or fixed ladder.

Exception: Fall restraint or arrest systems can be used in lieu of guardrails if the elevated locations are used infrequently (i.e. 12 times or less per year) by employees.

7.2 Stairs (CCR, Title 8, §3214, §3231, §3234)

- 7.2.1 Every flight of stairs with four or more risers shall have handrails or stair rails as specified in CalOSHA, section 3214.
- 7.2.2 When employees approach within 6 feet of an unprotected edge of a roof to perform intermittent work (i.e. 4 times a year, or less) safety belts and lanyards, or an approved fall protection system (restraint or arrest) may be used instead.

7.3 Toe boards (CCR, Title 8, §3210)

- 7.3.1 Toe boards shall be provided at all elevated locations that are 6 feet or more above places where employees normally work or pass to prevent a hazard from falling tools, materials, or equipment. A standard toe board is 4 inches nominal in vertical height, with not more than ¼-inch clearance above floor level.

8.0 LADDERS (CCR, Title 8, §3276 - §3280)

The chief hazard when using a ladder is falling. A poorly designed, maintained, or improperly used ladder may collapse under the load placed upon it and cause the employee to fall. The following safety practices, in addition to any other applicable requirements found in CalOSHA, sections 3276-3280, shall be followed:

8.1 Fixed Ladders:

- 8.1.1 When accessing structures via fixed/stationary ladders, employees must be protected from falls if the fixed ladder is over 20 feet in height. If no cage or ladder climbing system exists, a self-retracting lifeline or a ladder climbing system can be used for fall protection.
- 8.1.2 Fixed ladders on all tanks and/or structures shall be inspected prior to use and any deficiency reported immediately to a supervisor.

8.2 Extension Ladders:

- 8.2.1 Extension ladders must be inspected prior to use.
- 8.2.2 Documented inspections must be performed quarterly using the computerized work management system, or similar.
- 8.2.3 If the ladder is defective, it must be immediately removed from service and destroyed.
- 8.2.4 Employees accessing high places using extension ladders must place the ladder on firm footing.

- 8.2.5 Extension ladders must extend 3 feet past the landing and when practical, be tied off to the structure.
- 8.2.6 Employees must maintain three-point contact when climbing extension ladders.
- 8.2.7 For each 4 feet in height, extension ladders should be placed in such a manner that the slope is one foot from the structure (i.e. maintain a slope of 4:1 or 75 degrees).
- 8.3 Step Ladders:**
 - 8.3.1 Step ladders must be inspected prior to use.
 - 8.3.2 Documented inspections must be performed quarterly using computerized work management system, or similar.
 - 8.3.3 If the ladder is defective, it must be removed from service and destroyed.
 - 8.3.4 Review the manufacturers' requirements for use of steps and load capacities. Step ladders must be fully open and both spreaders locked.
- 8.4 Ladder Classifications:** The ladder must support the combined weight of the person, plus the materials and tools. Ensure that the ladder is properly rated for the type of work being performed.
 - 8.4.1 Ladders must be in good condition and of Class I duty rating or higher or rated for the expected load, whichever is higher.

Ladders Duty Rating and their Maximum Weight Capacities

Class Duty Rating	Work Load	Duty Rating
IAA	375 pounds	Special Duty
IA	300 pounds	Extra-Heavy-Duty
I	250 pounds	Heavy-Duty
II	225 pounds	Medium-Duty
III	200 pounds	Light-Duty

9.0 SCAFFOLDING (CCR, Title 8, §3275)

Job tasks which require working from a scaffold will be performed by an outside contractor.

10.0 ELEVATED WORK PLATFORMS AND AERIAL DEVICES

Job tasks which require working from an elevated work platform will normally be performed by an outside contractor. However, in the event an unplanned or emergency activity requires employees to work from an elevated work platform, sections 10.0 will be implemented:

10.1 Scissor Lift or Other Elevating Work Platforms (CCR, Title 8, §3642)

- 10.1.1 If the guardrails on scissors lifts or other elevated work platforms are between 39 and 42 inches in height, no fall protection is required.
- 10.1.2 If guardrails on scissors lifts or other elevated work platforms are less than 39 inches high, an approved personal fall protection system must be used.
- 10.1.3 Employees are not permitted to stand on the side rails or use planks/ladders to gain greater working height.
- 10.1.4 In the event that the work platform is to be moved while occupied in a raised position, the occupants must be connected to the platform using a shock absorbing lanyard that limits free fall to a maximum of 6 feet.

10.2 Aerial Devices (CCR, Title 8, §3648)

- 10.2.1 Employees are required to wear a full-body harness with a 6-foot shock-absorbing lanyard when working from aerial devices. Body positioning belts are not permitted.

- 10.2.2 Employees elevated in a crane personnel basket are required to wear a full-body harness with a 6-foot shock-absorbing lanyard. The crane personnel basket must be inspected prior to use and trial lift procedures followed as per Cal-OSHA requirements in California Code of Regulations Title 8, General Industry Safety Orders, Article 98, Section 5004.

10.3 Elevating Employees with Lift Trucks (Forklifts) (CCR, Title 8, §3657)

- 10.3.1 Work platforms shall be large enough to accommodate the employee and materials, but not less than two (2) feet by two (2) feet.
- 10.3.2 The platform must be secured to the boom, forks or mast to prevent tipping, slipping or falling and have standard guardrails and toe boards.
- 10.3.3 If clearance restrictions or the nature of the work prohibits the use of guardrails, and an employee is exposed to a fall of 4 feet or more, a personal fall arrest system, fall restraint system, or work positioning device shall be used as an alternate means of protecting employees from falling. The lanyard length shall allow the operator freedom of movement in the working area, but shall be rigged so that an employee can neither free fall more than 4 feet nor contact any lower level.
- 10.3.4 Elevating employees using variable reach, boom-type, rough-terrain industrial trucks must be within limitations of the load chart, or shall not exceed 1/3 of rated capacity.
- 10.3.5 The work platform must have a back guard extending from foot level to 7-feet with openings less than 1" to keep the occupant from the forklift machinery.
- 10.3.6 The lift truck must be equipped with a means to prevent the raised platform from lowering at a rate in excess of 135 feet per minute in case of a failure in the load supporting hydraulic control circuits.

11.0 OPENINGS (ground, floor, wall, pits) (CCR, Title 8, §3211, §3212, §3213)

11.1 Floor and Wall Openings

Floor openings and holes, wall openings and holes, and the open sides of platforms may create hazards. People may fall through the openings or over the sides to the level below. Objects, such as tools or parts, may fall through the holes and strike people or damage machinery on lower levels.

- 11.1.1 Every **floor opening** into which persons can accidentally walk or fall through shall be protected by either:
- A standard guardrail (to include toe boards where people may pass below the opening), or
 - A cover of standard strength and construction. When the floor opening cover is removed, a temporary guardrail shall be in place, or an attendant shall be stationed at the opening to warn personnel of the hazard. If entering a floor opening greater than 4 feet deep, confined space procedures shall be followed.
- 11.1.2 Every **wall opening** or partition not provided with a glazed sash, having a height of at least 30" and a width of at least 18 inches, through which a person might fall more than 30 inches shall be protected by either:
- A standard guardrail, or
 - A barrier that is capable of withstanding a force of at least 200 pounds applied horizontally at any point.
- 11.1.3 **Ladderway floor openings:** Every floor opening or platform that is accessed by a ladder, (including a ship ladder) must be protected by guardrails and toe boards on all exposed sides. The ladderway opening must have a swinging gate or equivalent protection, or the passageway must be offset so that a person cannot walk directly into the opening.
- 11.1.4 **Manholes:** Whenever a manhole cover is removed, the opening shall be constantly attended by someone, or shall be protected by removable covers or by portable railings. If entering a manhole greater than 4 feet deep, confined space procedures shall be followed.

11.2 Open Pits

Whenever a cover is removed or opened which exposes employees to an unprotected open pit (i.e. no guardrails or other effective barriers), the opening shall be constantly attended by someone, or shall be protected by removable covers or removable railings that provide protection equivalent to that provided by a guardrail. If entering a pit greater than 4 feet deep, confined space procedures shall be followed.

11.2.1 Unused portions of service pits and pits not in actual use must be either covered or protected by portable guardrails which meet the requirements of standard guardrails.

11.2.2 Permanent yard surface openings such as pits or sumps must be guarded in accordance with section 11.1.

11.2.3 Trench or conduit covers must be designed to carry a truck rear-axle load of at least 20,000 pounds when located in roadways.

11.2.4 Manhole covers must be designed to comply with standard highway requirements if any; otherwise, they must be designed to carry a truck rear-axle load of at least 20,000 pounds.

12.0 RESPONSIBILITIES

12.1 **Director of Technical Services** has the overall authority and responsibility for implementing the provisions of the Fall Protection Program for LWD. Specific responsibilities include, but are not limited to:

- Recommending that funding is provided to successfully implement the program requirements.
- Ensuring that the Program and its requirements are enforced.
- Implementing all other relevant responsibilities as identified in the Injury Illness Prevention Program (IIPP).

12.2 **Field Services Superintendent** is responsible for:

- Responsibility and authority for ensuring this program is fully implemented.
- Monitoring the effectiveness of the Fall Protection program by performing a program review and completing the *Program Review and Certification Form (Attachment A)*.
- Monitoring fall protection training to ensure its effectiveness and coordinate refresher training for affected departments if necessary.
- Providing Managers guidance on the laws and regulations governing the Fall Protection Program.
- Conducting the necessary research to determine those requirements and the standards that apply.
- Assisting in the development of training programs for use by Competent Persons and Supervisors in matters concerning fall protection.

12.3 **Field Services Supervisor** is responsible for:

- Ensuring that each employee under their direct supervision understands the fall protection requirements in this Program as they relate to their job activities and associated fall hazards.
- Ensuring proper fall protection equipment and systems are used, when required.
- Ensuring fall protection equipment is removed from service if damaged or defective.
- Ensuring that lifelines or lanyards that have been subject to impact loading are immediately removed from service and destroyed to prevent accidental use by employees.
- Performing a fall hazard analysis, when required.
- Assisting in providing affected employees with fall protection training when required.
- Acting as a resource for questions on specific fall hazards and protective systems.

12.4 **Fall Protection Competent Person/Field Services Technician** is responsible for:

- Inspecting all personal fall arrest equipment at least twice a year or more.
- Supervising the fall prevention plan implementation.
- Assisting the supervisors in performing the fall hazard analysis, when required.

- Providing assistance and/or conducting job-specific fall protection training for all affected employees.

12.5 LWD Employees are responsible for:

- Following the work practices described in this document, including the use of appropriate fall protective equipment, fall protection systems, and other required personal protective equipment (PPE).
- Maintaining work areas free from slip, trip & fall hazards.
- Correcting or immediately reporting slip, trip and fall hazards.
- Inspecting fall protective equipment and systems (i.e. ladders, personal fall protection equipment, etc.) prior to use.
- Reporting any damaged fall protection equipment or systems to their immediate supervisor and removing such systems from service until they have been repaired and/or replaced.
- Following all administrative and engineering controls where provided.
- Wearing fall prevention and arrest equipment when administrative controls and/or engineering controls are not provided or cannot be used.

13.0 Training & Documentation

13.1 Initial Training:

- 13.1.1 New Employees will receive introductory (awareness level) training on fall protection as part of New Employee Orientation.
- 13.1.2 If job activities expose employees to fall hazards, task-specific fall protection training will be provided prior to performing that activity. A competent person designated by LWD will assist with job-specific fall protection training.
- 13.1.2.1 The type of training will be suitable to the task being performed and the associated fall hazards that they may be exposed to. Training elements will include the following:
- Fall hazards associated with the specific task to be performed.
 - Selecting, using & inspecting the required fall protection equipment.
 - Rescue procedures if required.
- 13.1.3 Employees designated as competent persons and/or qualified persons will receive the required level of training necessary to perform their respective duties as described in this Program.

13.2 Refresher Training:

- 13.2.1 Refresher training will be conducted at a frequency necessary for personnel to remain proficient and informed of these procedures. Additionally, retraining shall be initiated under any of the following conditions:
- Changes in the workplace that renders previous training obsolete.
 - Changes in the types of fall protection systems or equipment to be used that renders previous training obsolete.
 - The addition of new fall protection equipment.
 - Whenever a periodic inspection, or general observations by the employer, reveals that there are deviations from or inadequacies in the employee's knowledge or use of fall protection equipment or procedures.
 - Employee training records are filed in the certifications folder located on server W: in accordance with the District's records retention policy.

ATTACHMENT B

Cal-OSHA Fall Protection Trigger Heights

List of common fall protection heights above which guardrails or a personal fall protection system must be used.

Height Trigger	Work Location/Type of Work	Requirement	CalOSHA section
30 Inches	Buildings: Open sides of unenclosed elevated work locations (eg: all pump stations)	<ul style="list-style-type: none"> Guardrails if location is accessed frequently (> 12 times each year) Infrequent work – may use personal fall protection system instead 	§ 3210(a)
4 Feet	Other elevated locations: Unprotected sides where an employee can fall 4 feet or more. (eg: wet well, overflow basin, valve vault, influent vault and more)	<ul style="list-style-type: none"> Guardrails if location is accessed frequently (> 12 times each year) Infrequent work – may use personal fall protection system instead 	§ 3210(b)
7 ½ Feet	When construction work activities expose employees to falling more than 7 ½ feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12 or other sloped surfaces steeper than 40 degrees. (eg: 2 nd & 3 rd floor Admin Bldg.)	Approved personal fall arrest, personal fall restraint or positioning system.	§1670(a)
No height trigger	Skylights or skylight openings where employees approach within 6 feet (eg: 3 rd floor Admin Bldg, 2 nd floor Batiquitos Pump Station Control Room)	<ul style="list-style-type: none"> Skylight screens that support 400 lbs. or 2x the weight of an employee Guardrails Covers that support 400 lbs or 2x the weight of an employee Fall Protection Plan 	§ 3212(e)
30 inches	Wall or partition opening (without a glazed sash) that is at least 30 inches in height and 18 inches in width (eg: Batiquitos and Leucadia Pump Stations wet wells)	<ul style="list-style-type: none"> Guardrails Other barrier capable of withstanding a force of at least 200 pounds applied horizontally at any point 	§ 3211(a)
6 Feet	Crossing over trenches/excavations wider than 30 inches (eg: any excavations by outside contractors)	Walkways or bridges with standard guardrails	§ 1541(l)

**Leucadia Wastewater District
FALL PROTECTION PROGRAM**

04/18/2023

OSHA Fall Protection Requirement
Exert from MNOSHA (March 2005)

OSHA Dept of Labor and Industry Construction fall protection requirements	Guardrail systems	Safety net systems	Personal fall arrest systems	Covers	Positioning device	Fences	Barricades	Equipment guards	Controlled access zone	Warning line system/guardrail	Warning line/safety net	Warning line/personal fall arrest	Warning line/safety monitor	Safety monitor	Fall Protection Plan
Unprotected sides and edges	X	X	X												
Leading edges	X	X	X												X*
Hoist areas	X		X												
Holes	X		X	X											
Formwork/reinforcing steel		X	X		X										
Ramps, runways, other walkways	X														
Excavations	X					X	X								
Excavations (wells, pits, shafts)	X			X		X	X								
Dangerous equipment (less than six feet)	X							X							
Dangerous equipment (above six feet)	X	X	X												
Overhand bricklaying	X	X	X						X						
Overhand bricklaying (reaching 10" below)	X	X	X												
Roofing work (low slope)	X	X	X							X	X	X	X	X**	
Steep roofs	X	X	X												
Precast concrete erection	X	X	X												X*
Residential construction (Group 1,2,3, or 4 activity – see residential chart)															X*
Wall Openings	X	X	X												
Other walking/working surfaces	X	X	X												

* Must show infeasibility or greater hazard

** Roof width less than 50 feet

ATTACHMENT C
Fall Hazard Analysis Form

This form is intended to be used to perform a fall job hazard analysis (JHA). The person completing this form must be trained and competent to recognize fall hazards and be familiar with fall protection systems that are available, or can be accessed, by the district.

Name: _____

Date: _____

Location/Activity _____

Part 1: Fall Hazard Survey:

a. Identify fall hazards associated with this activity or location.

- Elevated building location > 30 inches **without** standard guardrails or other barrier 42 inches high
- Other elevated location > 4 feet **without** guardrails or other barrier 42 inches high
- Skylight **without** a properly rated guardrail, cover, or screen (rating: 400 lbs. or 2 x weight of an employee, or if glazed with translucent materials not certified by an engineer in the State of California)
- Uncovered** wall or partition opening that is least 30" (height) and 18" (width)
- Unprotected** floor opening
- Open pit (e.g. wet well hatchway, uncovered hole, chutes, pits and similar sunken locations)
- Ladderway with **exposed** sides, or the opening **does not have** a swinging gate, offset, or equivalent protection
- Other: _____
- No fall hazards due to the following** (describe): _____

b. Identify any condition that may impact the use of **conventional fall protection systems** (fixed or portable guardrails, personal fall protective systems) or use of an **alternate method** identified above:

- No fixed anchor point meeting the requirements for a fall arrest system (5,000 lbs.), work positioning device (3000 lbs.) or fall restraint systems (4 times intended load).
- Using an elevated platform is not feasible or hazardous (describe): _____
- Using a ladder is not feasible or hazardous because: _____
- Using scaffolding is not feasible or hazardous because: _____
- Environmental factors that may adversely impact the installation, use, maintenance and dismantling of the alternative system or fall protection system (e.g. soft or sloped ground, wet slippery conditions, uneven or unstable conditions, adverse weather, etc.)
- Nearby hazards that adversely impact the installation, use, maintenance and dismantling of the alternative system or fall protection system (electrical hazards, impalement hazards, obstruction hazards, etc.).
- Other: _____

c. Identify **alternative** methods to perform this work to eliminate or reduce fall hazards:

- Will perform work using an aerial lift or other approved elevated work platform
- Will perform work using a ladder
- Will perform work using scaffolding
- NA
- Other _____

Part 2: Construction Activities: Describe the fall protection measures to be used for this project when performing construction activities. See "OSHA Construction Fall Protection Requirements" matrix one page 15 to help determine appropriate fall protection options.

Part 3: Non-construction activities: Describe the fall protection measures to be used for this project for performing non-construction activities.

- Portable standard guardrails meeting requirements in Cal OSHA §3209
- Fall Arrest System with fixed anchor that is capable of supporting at least 5,000 pounds per employee attached
- Work positioning device with fixed anchor that can support two times the intended load or 3,000 pounds, whichever is greater
- Fall Restrain System with a fixed anchor that support 4 times the intended load
- Personal Fall Protective System (fall arrest, work positioning, fall restraint) using a portable weighted anchor that is capable of supporting the required load
- Covers that are capable of supporting 400 lbs. or 2x the weight of an employee, whichever is greater
- Skylight screens that are capable of supporting 400 lbs. or 2x the weight of an employee, whichever is greater
- Other: _____

Part 4: Route this form to the following:

- Field Services Supervisor

ATTACHMENT D
Fall Rescue Plan Checklist

General Information:

The supervisor or their designee will conduct a pre-job briefing before conducting any work that requires employees to wear conventional fall protection (fall arrest, work positioning, or fall restraining). The briefing will include all work procedures, a specific rescue plan and the work location. If working conditions change significantly, the lead employee will stop the work and conduct a revised briefing.

Step 1: List the method available to call for off-site help (i.e. 911): _____

Step 2: List who is trained and immediately available to provide initial first aid/CPR procedures:

Step 3: Person designated to direct emergency responders to the work location: _____

Step 4: List the location of the nearest first aid kit: _____

Step 5: Besides calling 911, who else will be contacted in the event of a fall or medical emergency. List in order of priority and the mode of communication (i.e. how the contacts will be made; cell phone, land line phone, radio, etc.)

#1 Contact Name: _____ Phone # _____ Mode _____

#2 Contact Name: _____ Phone # _____ Mode _____

#3 Contact Name: _____ Phone # _____ Mode _____

Step 6: Work details:

a. **Location** where the work will be performed. Name of process, building, structure and specific areas is necessary. _____

b. **Type of Work (job activities being performed):** _____

Step 7: Describe **rescue equipment** available to assist the victim with self-rescue, or with assisted rescue.

Type/Name of Equipment	Location	Onsite and Available?	Qualified person available to operate it? (or NA)

Step 8: Rescue Plan: Check the type of fall protection being used and describe the rescue plan that will be implemented to assist the victim in the event of an emergency fall incident.

- Fall arrest
 Work positioning
 Fall Restraining
 Fall Protective Plan

Fall Incident Notification Worksheet

Emergency Assessment:

In the event of an emergency, the employee on this project should be prepared to answer the following questions and be able to describe the emergency-to-emergency responders.

Location: _____

Injured Person: _____

Type of Injury: _____

Communicate following to dispatch:


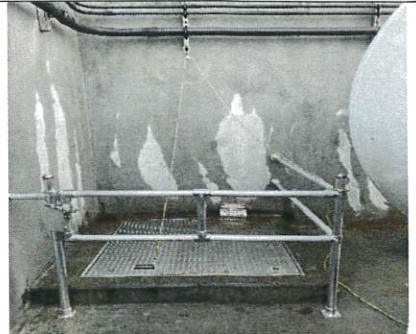


- Is the work environment safe for responders to enter? ___ yes ___ no
- Is the worker accessible to EMS personnel? ___ yes ___ no
- Are the injuries life-threatening? ___ yes ___ no
- Is the injured worker conscious? ___ yes ___ no
- Is the victim breathing? ___ yes ___ no
- Does the victim have a heart beat? ___ yes ___ no
- Do the injuries require First Aid? ___ yes ___ no
- Are fire services needed to provide additional rescue equipment? ___ yes ___ no



I certify that the rescue plan has been discussed with all employees involved and that all parties have had the opportunity to ask questions and fully understand their responsibilities in the event of an emergency.





Signed: _____
Supervisor or competent person on this project

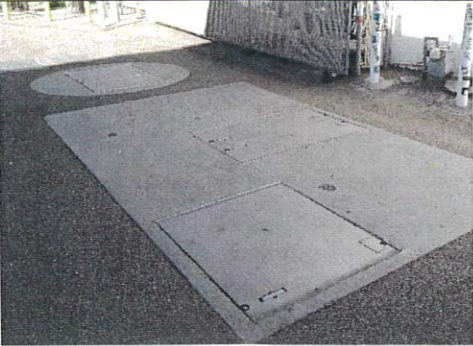


Date: _____

ATTACHMENT E
LWD Updated Fall Hazard Analysis

Location Name	Fall Hazard Analysis	Fall Protection Required	Recommendations and Considerations	Photo
Leucadia Pump Station				
Wet well	Employees are exposed to a fall hazard greater than 4' whenever grates on the floor are open. Wet wells are accessed when required. Stairs, railing, and elevated floor grating is installed, but can be removed if needed.	Yes	Use portable or personal fall protection and life lines. Use fall protection whenever grating or any safety measures are removed. The use of third-party rescue services are required when making most entries into wet well.	
Overflow Basin	Employees are exposed to a fall hazard greater than 4' whenever the lid is open. There are four overflow basin openings. The overflow basin is rarely accessed.	Yes	Use body harness and lifeline when accessing. Utilize protective railing whenever hatches are open. The use of third-party rescue services are required when making most entries into overflow basins.	
Valve Vault	Employees are exposed to a fall hazard greater than 4' whenever any grating is removed. There is a permanent ladder installed for access. The valve vault is accessed about one time a month. No fall protection is required on a permanent fixed ladder as long as it's less than 20' high.	No	Use of lifeline is recommended.	
Influent Vault	Employees are exposed to a fall hazard greater than 4' whenever any hatch is open. There is a permanent ladder installed for access. The influent vault is accessed appx once a day. No fall protection is required on a permanent fixed ladder as long as it's less than 20' high.	No	Use of lifeline is recommended.	

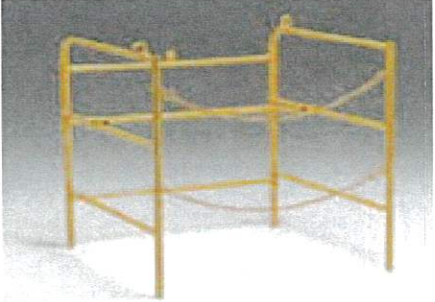



Location Name	Fall Hazard Analysis	Fall Protection Required	Recommendations and Considerations	Photo
La Costa Pump Station				
Wet well and Drywell	Employees are exposed to a fall hazard greater than 4' whenever hatches are open. Wet well is rarely accessed and drywell is accessed daily. Drywell has permanent ladder and harness system installed. Barrell type entry acts as a guardrail. Fall potential exceeds 20'.	Yes	Use portable or personal fall protection for wet well entry. Use fixed ladder and supplied harness/pulley system should be used for all drywell entries.	
Saxony Pump Station				
Wet well and Valve Vault	Employees are exposed to a fall hazard greater than 4' when wet well hatches are open and netting is removed. Valve vault is +/- 4' in depth. All hatches have chains and most vaults have safety netting for extra protection. The drywell has a permanent ladder installed to assist with entry.	Yes, for wet well entries No for valve vault entries	Use portable or personal fall protection for wet well entry.	

Location Name	Fall Hazard Analysis	Fall Protection Required	Recommendations and Considerations	Photo
Batiquitos Pump Station				
Wet well, drywell, and overflow basin	Employees are exposed to a fall hazard greater than 4' whenever any hatch is open. Wet wells are accessed rarely. Wet wells have fiberglass stairs, railing, and elevated floors that can be removed if needed making a potential for a fall greater than 4'. Four drywell and two overflow basin hatches each have safety netting installed.	Yes	Use portable or personal fall protection when working near or in open hatches when netting has been removed. The use of third-party rescue services is required when making most entries into wet wells.	
Rancho Verde Pump Station				
Wet well and Valve Vault	Employees are exposed to a fall hazard greater than 4' when wet well hatch is open. Valve vault is +/- 4' in depth. All hatches have safety chains installed. The valve vault has a permanent ladder installed to assist with entry.	Yes, for wet well entry No for valve vault entry	Use portable or personal fall protection when making wet well entries and when safety chains are removed.	
Village Park 5 Pump Station				
Wet well and Valve Vault	Employees are exposed to a fall hazard greater than 4' when wet well hatch is open. The wet well has movable safety grates installed. The valve vault is +/- 4' in depth and has safety netting installed along with a permanent ladder.	Yes, for wet well entry No for valve vault entry	Use portable or personal fall protection when removing the safety grates and making wet well entries. Exercise caution when safety netting is removed from valve vault.	
Encinitas Estates Pump Station				
Wet well and Valve Vault	Employees are exposed to a fall hazard greater than 4' when wet well hatch is open. The wet well has moveable safety grates installed. The valve vault is +/- 4' in depth and has safety grates installed along with a permanent ladder.	Yes, for wet well entries No for valve vault entry	Use portable or personal fall protection when removing the safety grates and making wet well entries. Exercise caution when safety grate is removed from valve vault.	

Location Name	Fall Hazard Analysis	Fall Protection Required	Recommendations and Considerations	Photo
Avocado Pump Station				
Wet well and Valve Vault	Employees are exposed to a fall hazard greater than 4' whenever the wet well and valve vault hatches are open. The wet well is rarely accessed, but the valve vault is entered about once a week. The wet well has movable rigid safety grates and the valve vault has permanent ladder installed. No fall protection is required on a permanent fixed ladder as long as it's less than 20' high.	Yes, for wet well entries No for valve vault entries	Use portable or personal fall protection when making wet well entries. Always maintain three points of contact when using ladder in valve vault. Always have someone spotting topside when someone is in wet well or valve vault as there are many pedestrians and vehicles close by.	
Village Park 7 Pump Station				
Wet well and drywell	Employees are exposed to a fall hazard greater than 4' whenever the wet well manhole lid and drywell lids are open. Drywell has permanent ladder installed along with a barrel type entry acting as a guardrail. Wet well is rarely accessed while drywell is accessed once a week. No fall protection is required on a permanent fixed ladder as long as it's less than 20' high.	Yes, for wet well entries No for drywell entries	Use portable or personal fall protection when making wet well entries. Always maintain three points of contact when using ladder in drywell.	
Diana Pump Station				
Wet well and Valve Vault	Employees are exposed to a fall hazard greater than 4' whenever the wet well and valve vault hatches are open. The wet well is rarely accessed, but the valve vault is entered about once a week. The wet well has movable rigid safety grates and the valve vault has permanent ladder installed. No fall protection is required on a permanent fixed ladder as long as it's less than 20' high.	Yes, for wet well entries No for valve vault entries	Use portable or personal fall protection when making wet well entries. Always maintain three points of contact when using ladder in valve vault. Always have someone spotting topside when someone is in wet well or valve vault as there are many pedestrians and vehicles close by.	

Leucadia Wastewater District
FALL PROTECTION PROGRAM

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Location Name	Fall Hazard Analysis	Fall Protection Required	Recommendations and Considerations	Photo
Standard Manholes				
All manholes	Employees are exposed to a fall hazard greater than 4' when most manhole lids are open. Although most are typically accessed only once or twice per year, some are as frequent as monthly. Typically, all work done at open manholes is conducted in teams of at least two employees.	Yes, when making entry	The opening must be constantly attended by someone when the manhole cover is open. It is recommended to use some type of portable fall protection (barriers) or personal fall protection (fall arrest) when working near open manholes  <i>Example Manhole Safety Rail.</i>	
LWD Admin Building				
Second and Third Floors	The second floor can be accessed by removable ladder for the outside while the third floor can be accessed by roof access with a permanently mounted ladder on the third floor inside of the building.	Yes, when working on second and third levels that require proximity near edges of building.	Either fall restraint, fall arrest, or a combination of both are required when near edges of building. See Fall Job Hazard Analysis for additional recommendations.	
AWT				
Reactor Clarifier and Chlorine Contact Basin	Employees are exposed to a fall hazard greater than 4' whenever they are working on the topside of the reactor clarifier or the Chlorine Contact Basin. Under normal working conditions, there are safety rails and elevated flooring installed above the mixing basin. During annual cleaning, field staff will need to utilize fall protection protocols as their work may extend past these safety measures. Staff enters the Chlorine Contact Basin once a year and enter when drained.	Yes, during annual cleaning or abnormal conditions. No, under normal working conditions.	Either fall restraint, fall arrest, or a combination of both are required when annual cleaning or abnormal work conditions arise. See Fall Job Hazard Analysis for additional recommendations.	

Notes: 1) Fall Rescue Plan Checklist (Attachment E) will be posted at each location named in the analysis.