

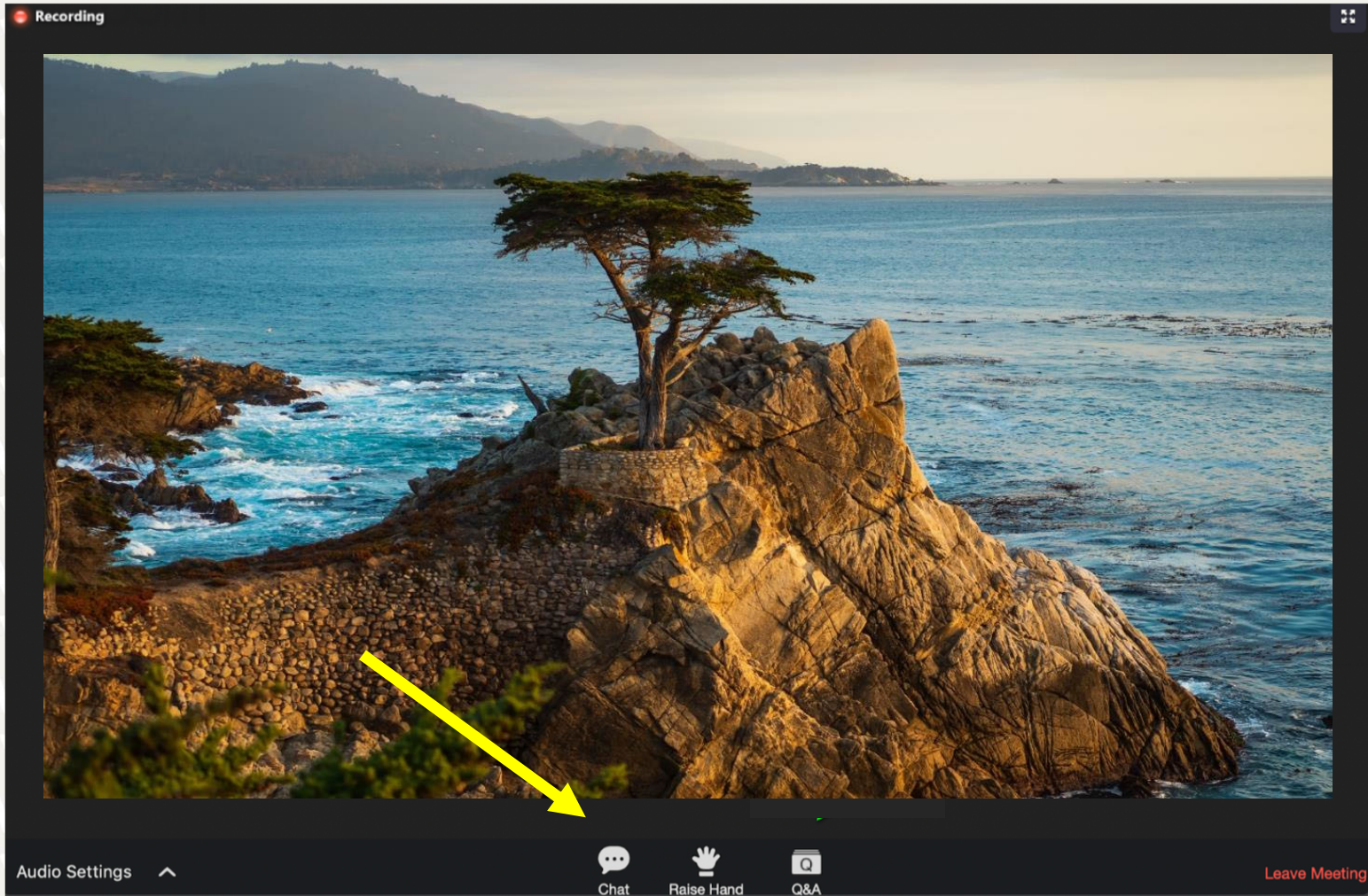


# Northern Safety Days

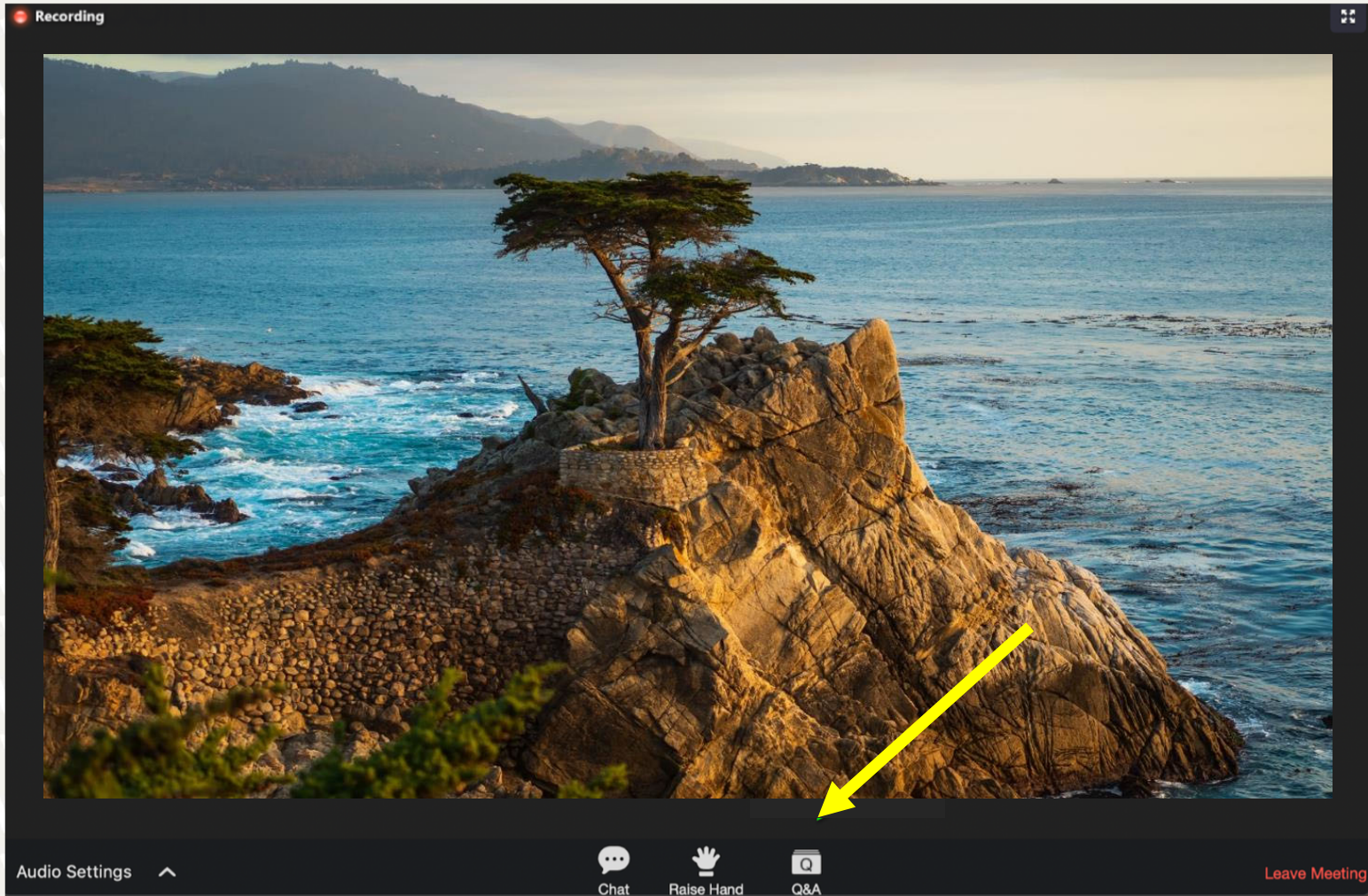
## Confined Space, Fall Hazards

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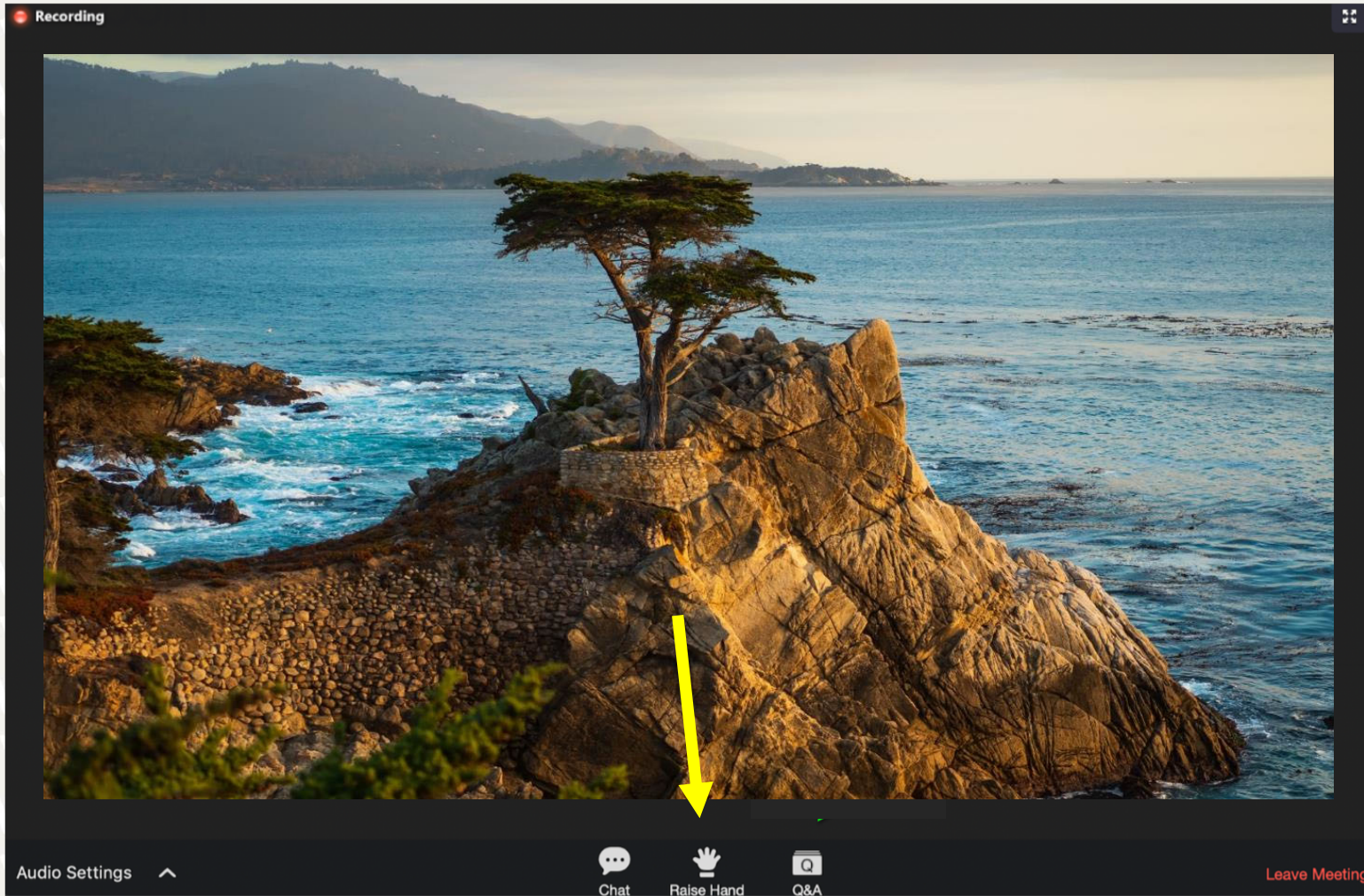
Webinar, November 12, 2020, 9:00 - 10:00




**Zoom Controls: Chat for Comments**



**Zoom Controls: Q&A for Questions**



**Zoom Controls: Raise Hand Feature May Not Be Used in Today's Webinar**

A photograph of a whale breaching the ocean surface, creating a large splash of water. The whale's head and back are visible above the water, and the sky is a clear blue. The text is overlaid on the image in a white, sans-serif font.

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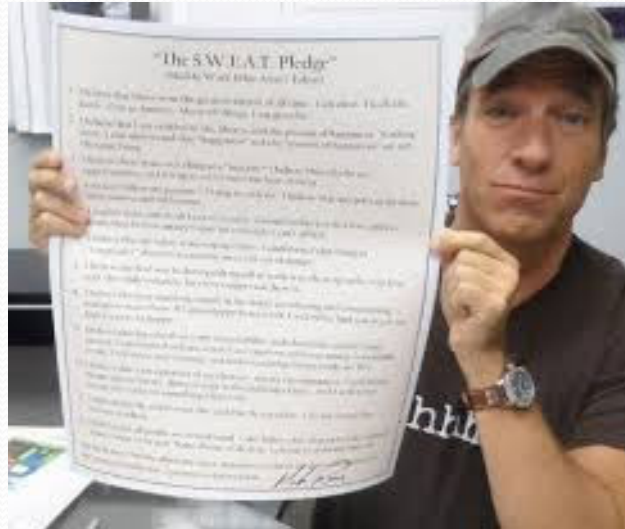
Peter Kuchinsky, II, CSP, STS-C, CEAS I

LEAD RISK MANAGEMENT ADVISOR

ACWA/JPIA

CWEA

## Promise Yourself First



### Pledge 6

"I believe that my safety is my responsibility. I understand that being in "compliance" does not necessarily mean I'm out of danger."



# **Objectives**

**Review what is a Confined Space (CS)**

**Discuss CS hazards and fall protection requirements**

**Explore solutions to address CS hazards and improve fall protection**





**The government agency  
that sets the standards  
employers are to follow  
regarding confined spaces  
and fall protection?**

***Cal/OSHA,  
not you!***



**The three conditions that define  
a confined space...**

***1. large enough to enter***

***2. Limited means of access***

***3. Not designed for  
continuous occupancy***

**Is this a Confined Space?**

**Does it present a fall hazard?**





Name the three types of Confined Space entries that can be performed...

*“Permit Required Entry”*

*“Alternate Procedure “C(5)” Entry “*

*“Declassified / Non-Permit Required Entry”*



# **Name potential Confined Space hazards?**

Lack of oxygen / excess of oxygen  
Flammable or explosive atmospheres  
Harmful gases, fumes or vapors  
Free flowing solid or an increasing level of liquid  
High temperature / environmental / lighting  
Moving parts / live electrical  
Structure and Layout  
Difficult to enter / exit

# **FALLS**



## **It does happen...**

In February 2018, a death of Sanitary District employee occurred when two employees of the Sanitary District near Santa Barbara were performing maintenance and inspection work around and in a confined space.

The employees removed the cover, then positioned themselves on opposite sides of the hole, crouching and walking over the opening that had been created. As they walked along the side, one worker lost balance and fell through the opening.

DOSH cited the Sanitary District for failing to provide fall protection. "The opening did not have any guardrails, and no other means ... to prevent the employee from falling."

A Southern California Water District was cited in 2016 for a serious injury accident where an employee fell into an unguarded manhole. This involved operations where employees were in the process of setting up the fall protection equipment to perform an entry operation.

**It does happen...**



## Statistically Speaking

**NIOSH investigations of Confined Space incidents show:**  
(670 fatalities over 10 years 2004-2015)

- 85% of the time a SUPERVISOR was present.
- 60% of "WOULD-BE" RESCUERS died.
- 29% of the dead were SUPERVISORS.
- 31% had Confined Space Entry WRITTEN PROCEDURES.
- 15% had Confined Space TRAINING.
- 0% had a RESCUE PLAN.
- 0% of the spaces were TESTED prior to entry.
- 0% were VENTILATED.





## **CCR §3210. Guardrails at Elevated Locations**

(a) Buildings. Guardrails shall be provided on all open sides of unenclosed elevated work locations, such as: roof openings, open and glazed sides of landings, balconies or porches, platforms, runways, ramps, or working levels more than 30 inches above the floor, ground, or other working areas of a building...

Exceptions:

11. Elevated locations used infrequently by employees if the employees using them are protected by a fall restraint/fall arrest system used in accordance with the requirements in Article 24 of the Construction Safety Orders.



## **CCR §3210. Guardrails at Elevated Locations**

(b) Other Elevated Locations. The unprotected sides of elevated work locations that are not buildings or building structures where an employee is exposed to a fall of 4 feet or more shall be provided with guardrails. Where overhead clearance prohibits installation of a 42-inch guardrail, a lower rail or rails shall be installed. The railing shall be provided with a toeboard where the platform, runway, or ramp is 6 feet or more above places where employees normally work or pass and the lack of a toeboard could create a hazard from falling tools, material, or equipment.

Exceptions:

(c) Where the guardrail requirements of subsections (a) and (b) are impracticable due to machinery requirements or work processes, an alternate means of protecting employees from falling, such as personal fall protection systems, shall be used.



## **CCR §1632**

### **Floor, Roof, and Wall Openings to Be Guarded.**

(e) Pits and trap-door floor openings shall be guarded by floor opening covers of standard strength and construction. While the cover is not in place the pit or trap openings shall be protected on all exposed sides by movable standard railings.

(f) Manhole floor openings shall be guarded by standard covers which need not be hinged in place. While the cover is not in place, the manhole opening shall be protected by standard railings.

(g) Temporary floor openings shall have standard railings.

(h) Floor holes, into which persons can accidentally walk, shall be guarded by either a standard railing with standard toeboard on all exposed sides, or a floor hole cover of standard strength and construction that is secured against accidental displacement. While the cover is not in place, the floor hole shall be protected by standard railing.

## **Fall Protection Options.**

**Guardrails**

**Covers / Grates**

**Fall Protection System**



# CCR §5157 Permit-Required Confined Spaces.



# Open Manholes



## Manhole Fall Protection Solutions



# Vault / Hatch Fall Protection Hazards





# Vault / Hatch Fall Protection Solutions





Five safe work practices to remember  
when entering confined spaces

1. *Test the air*
2. *Ventilate the space*
3. *Document conditions and  
Classify the space*
4. *Monitor the entry*
5. *Plan for Rescue*



**Remember...**

**“The wise see danger and  
change direction. The inane  
keep going and may suffer  
pain, injury, illness or death.”**

# Thank you for learning

*Review safety procedures and fall protection for every confined space entry*



*Don't become a victim of a Confined Space Entry*  
*[pkuchinsky@acwajpia.com](mailto:pkuchinsky@acwajpia.com)*



# QUESTIONS & ANSWERS

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**Thank You!**

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