

# Yosemite Search and Rescue "YOSAR"



**Yosemite National Park created Yosemite Search and Rescue ("YOSAR") in the 1970's**



**YOSAR workers are paid during SAR calls.**



**YOSAR's Helicopter Rescue Team ("HRT") is entirely paid Park staff.**



**Bell 205 A1++**

**H125/AS350 B3e**



**Bell 205 A1++  
(May to October)  
Call sign is "H551"**

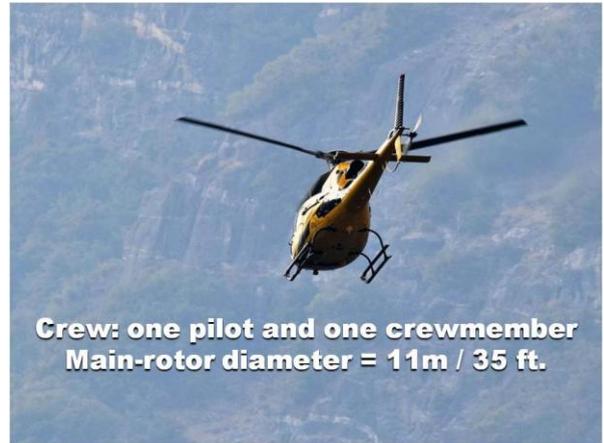
- **Live loads:** heli-rappel and short-haul (up to 300 feet).
- **Cargo:** short-haul, lower, and sling-load (longline).
- **NO hoist.**
- Main-rotor diameter = 15m / 48 ft.



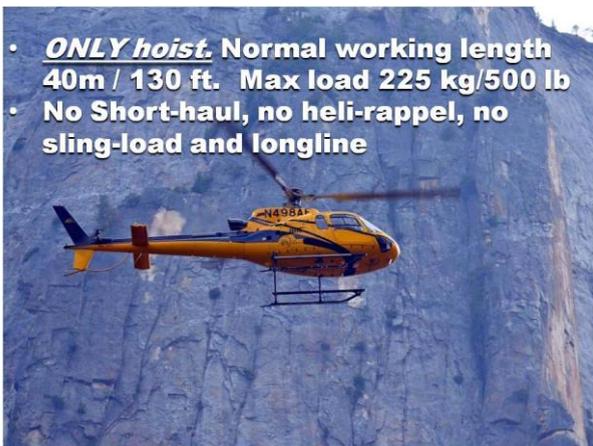
For short-haul and heli-rappel, the crew consists of one pilot, a lead crew member, and one or more assistants as needed.



**California Highway Patrol (CHP) H125/AS350 B3e**  
All year



Crew: one pilot and one crewmember  
Main-rotor diameter = 11m / 35 ft.



- **ONLY hoist.** Normal working length 40m / 130 ft. Max load 225 kg/500 lb
- No Short-haul, no heli-rappel, no sling-load and longline

### John Dill

Leader of Yosemite rescue work for more than 40 years. He has played a critical role in the development and evolution of YOSAR and the HRT.

**Helicopter Support for Big Wall Rescues**

**PART 1**  
Yosemite National Park

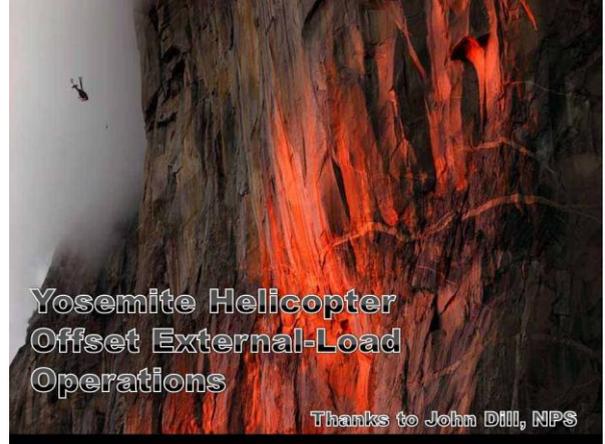
**PART 2**  
YOSAR

**PART 3**  
Yosemite Offset Technique



**Yosemite Helicopter Offset External-Load Operations**

Thanks to John Dill, NPS



**“Offset”**

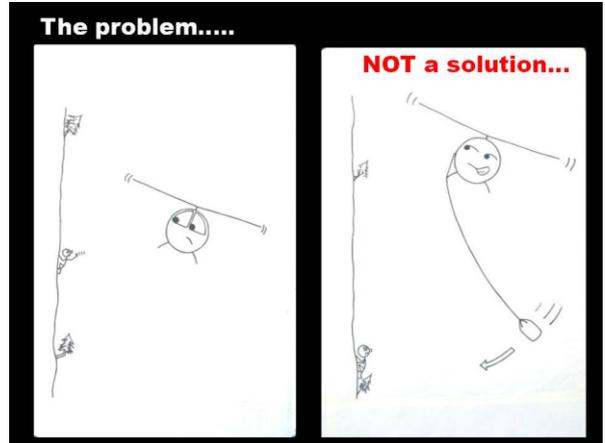
When the helicopter must hover **TO ONE SIDE** of the site.

The load must be pulled across that distance to reach the site.



**The problem.....**

**NOT a solution...**



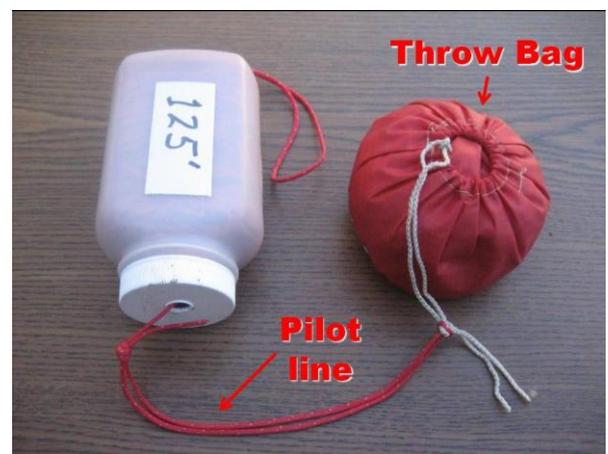
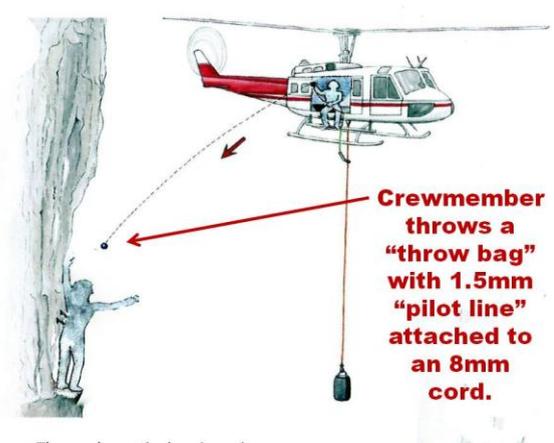
**NPS policy requires a minimum main-rotor clearance of 20 feet.**

Photo: Tom Evans



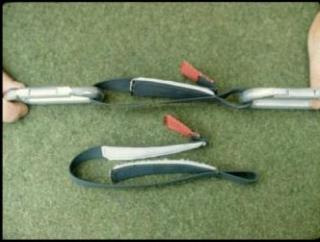
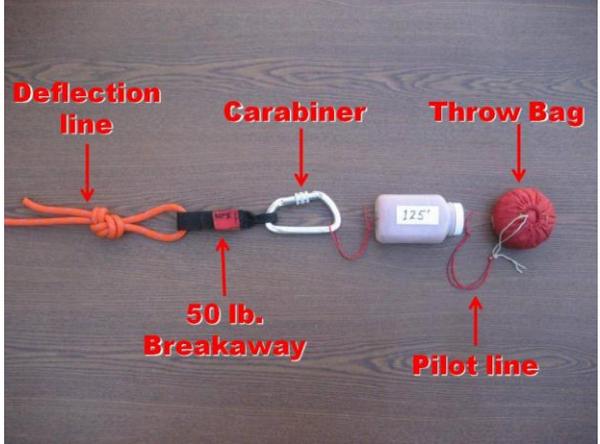
**A video of the Offset Technique**





**If the helicopter has to leave unexpectedly and a line is anchored to or tangled with people or rigging at the site, there's a risk of injury, line entanglement with the rotors, and/or throwing the aircraft out of balance.**

**50 lb. Breakaway**

**Deflection line**

**Carabiner**

**Throw Bag**

**50 lb. Breakaway**

**Pilot line**



**Read This Now!**

- \* Do not anchor this rope.
- \* Pull the cargo to you GENTLY, as we lower it. (There is a steel bit in the line.)
- \* When you get the cargo, clip it to your anchor.
- \* We are not in a hurry. Take your time.
- See other side now!

**This is what we will do.**

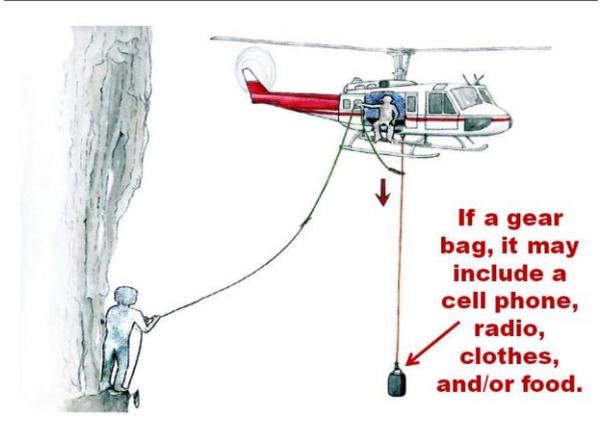
See Other Side Now!



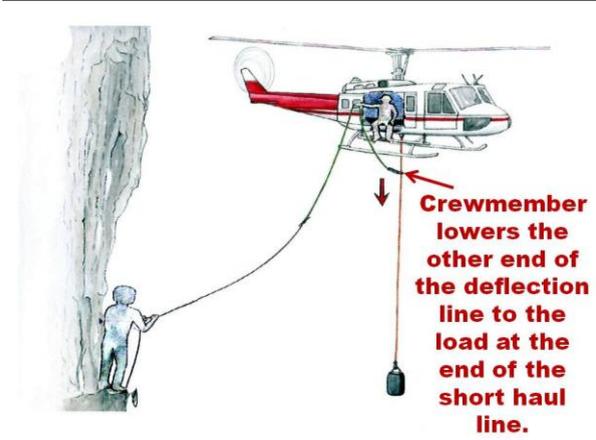
**This breakaway connects the deflection line to the load. It isolates the site from the load and therefore from the aircraft.**

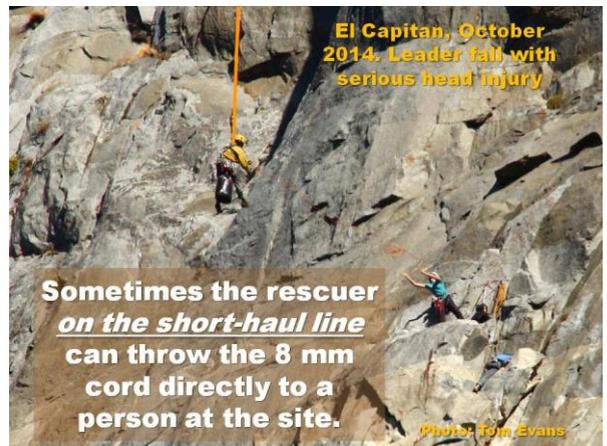
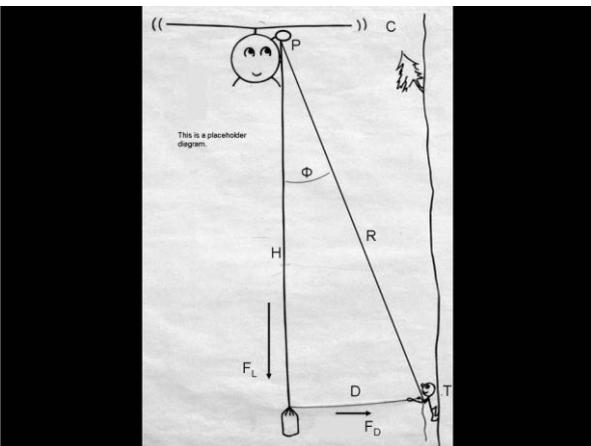
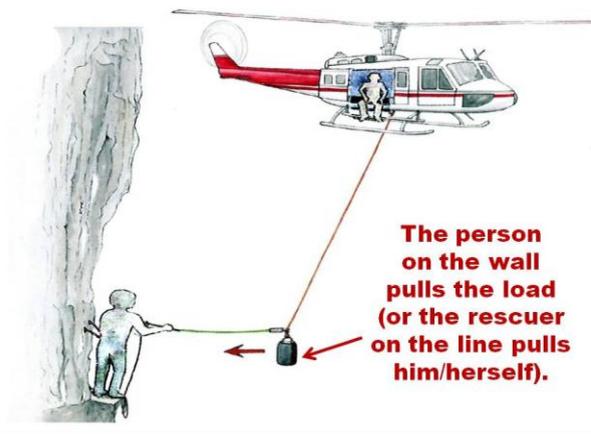


**The load can be a gear bag or a rescuer (with litter).**

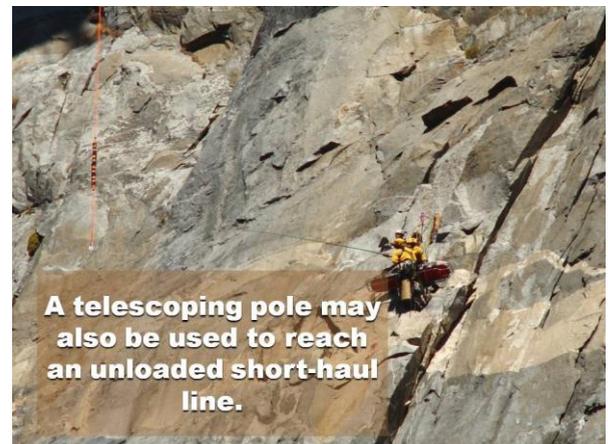
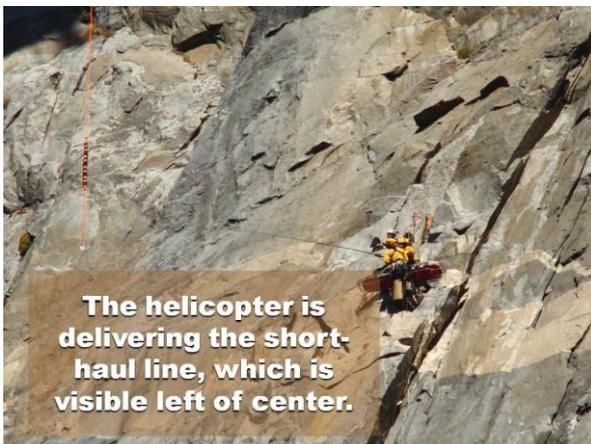
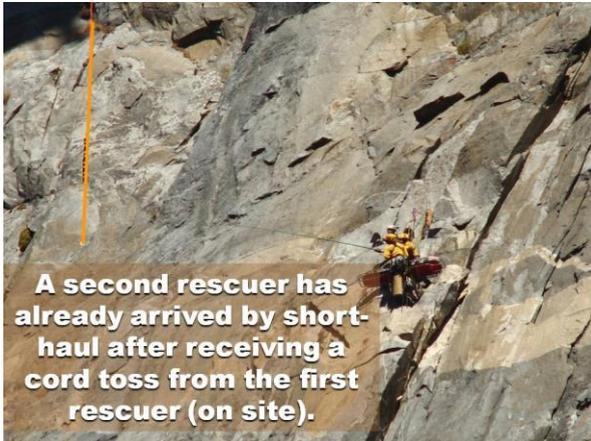
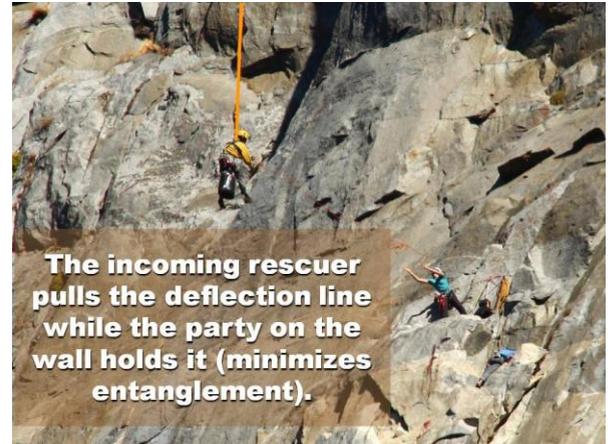


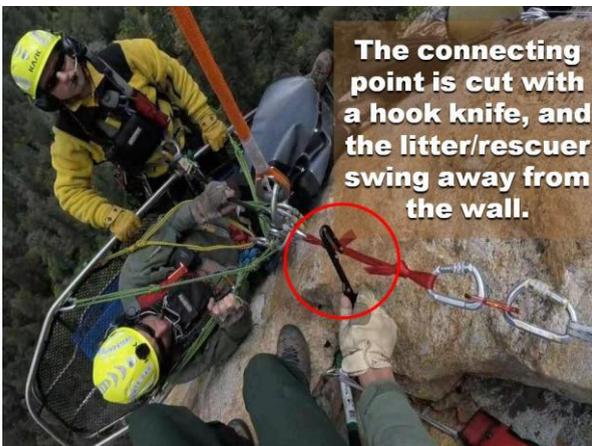
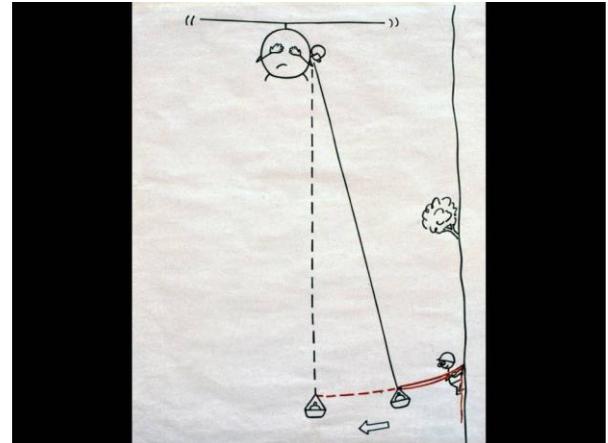
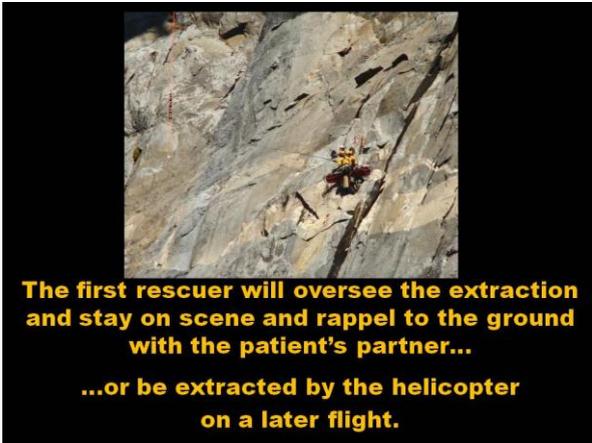
**If a gear bag, it may include a cell phone, radio, clothes, and/or food.**





**Video of  
Throw from longline**







**Cutaway video**

**Cutaway video #2**

**Cutaway video POV**

**One final look at the  
entire  
“Offset Technique”**

