

Safety Note #139

## MARINAS AND BOATYARDS: PHYSICAL HAZARD AWARENESS



A variety of physical hazards potentially exist at boatyards and marinas, including those caused by toxic atmospheres and hazardous chemicals, electrical and mechanical energy, flammable liquids and explosive gases, temperature extremes, falling objects, wet, uneven, and unstable surfaces, and open water bodies. However, the normal activities performed by UC ANR employees conducting research and extension at marinas and boatyards can be conducted safely by being aware of the potential physical hazards present at a marina or boatyard and taking suitable precautions to prevent accidents and injuries. This Safety Note provides information about safety measures that address specific hazards associated with marinas and boatyards.

**Toxic Atmospheres and Hazardous Chemicals.** When working with toxic chemicals, appropriate personal protective equipment (PPE) must be used. Normally, UC ANR employees are not working with toxic chemicals at marinas and boatyards, but it is a good practice to be aware of the work going on around you. If employees are sanding boats or applying coatings, then a respirator, safety goggles, protective clothing, and chemical resistant gloves are required. Annual training and fit testing is required for employees that wear respirators. See Safety Notes #38, #128, and #129 for additional information about respirator requirements and eye protection safety.

**Electrical and Mechanical Energy.** Machinery and equipment used in the work area present hazards from electricity and moving mechanical parts. Accordingly, staff must take precautions to prevent electrical shocks or electrocution by never using equipment with frayed or damaged electrical cords or touching energized power tools that are wet. Staff must also be cautious when using machinery that has shear, cutting, or pinch points. Prior to using machinery, always assure all guards and protective shields are in place around shear, cutting, or pinch points. Always be aware of moving machinery, such as forklifts or boat lifts, and establish safety precautions based on the assumption the driver cannot see you. If you are exposed to loud noise from machinery and/or equipment that exceeds 90 dBA (the level of gasoline powered lawnmower) for an extended time then hearing protection may be required. If machinery or equipment produces flying particles, then staff shall wear eye protection. Safety Notes #19, #22, #24, #33 and #38 provide additional information about electrical, pinch point, and shear and cutting point, hearing, and eye protection safety.

**Temperature Extremes and Solar Radiation.** Marina and boatyard work may take place during periods of extreme heat or cold. During periods of high temperatures it is important to wear light colored clothing and a hat with brim. Moreover, it is essential to have available and consume an adequate amount of water (one quart of water per hour). During cold weather it is important to wear several layers of clothing along with mittens and a hat. It is also important to stay dry and seek warm shelter when you feel tired or cold. Safety Notes #20 and #54 provide additional information about heat and cold stress. Wear sunglasses and sunscreen with a high rating for UVA and UVB protection; remember that solar radiation is reflected from the water. Safety Notes #23 and #46 provide additional information about eye and skin protection from the sun.

**Falling Objects.** Stay away from overhead hazards in a boat repair yard, such as crane loads, dry docked boats and boats in lifts. Be aware of workers above you on boats, scaffolds and elevated platforms. If you need to be near an area with overhead hazards for extended observation or consultation, then wear a hard hat. Walk along the center of the dock in marinas to avoid protruding boat prows. If you must pass someone, pause or step aside, be alert to potential hazards, and be mindful of the edge.

**Wet, Uneven, and Unstable Surfaces.** Wet, uneven, and unstable surfaces are common at marinas and boatyards, particularly when work is taking place on docks. When near the edge of a dock, hold onto a railing or other fixed object to maintain your balance. Wear closed toed shoes with slip resistant soles to avoid slipping on wet surfaces. Never run on docks and always look carefully where you are walking to avoid collisions. Safety Note #62 provides additional information about slips, trips, and falls.

**Water Bodies.** Marinas and boatyards typically include docks that are located above water bodies. If you need to reach into the water from the edge of the dock, it is best to lie perpendicular to the edge, with most of your body extended across the dock, and reach over the edge with your arms. If you must crouch or lean over the water, wear a personal flotation device (life vest) and a whistle and have a rope ladder and tether ready in case you fall in the water. Bring a safety buddy to sound the alarm and provide assistance if you fall into the water. Supervisors shall provide basic water rescue training, including procedures for sounding the whistle and alarm siren and the use of a flotation ring.



If you are injured at a marina or boatyard, report the injury to your supervisor immediately. As needed, obtain first aid or professional medical care promptly.

**Notes: Portions of this Safety Note were developed from information provided by Leigh Johnson, Marine Advisor, San Diego County Cooperative Extension. See Safety Note #138 for general marina and boatyard safety information.**