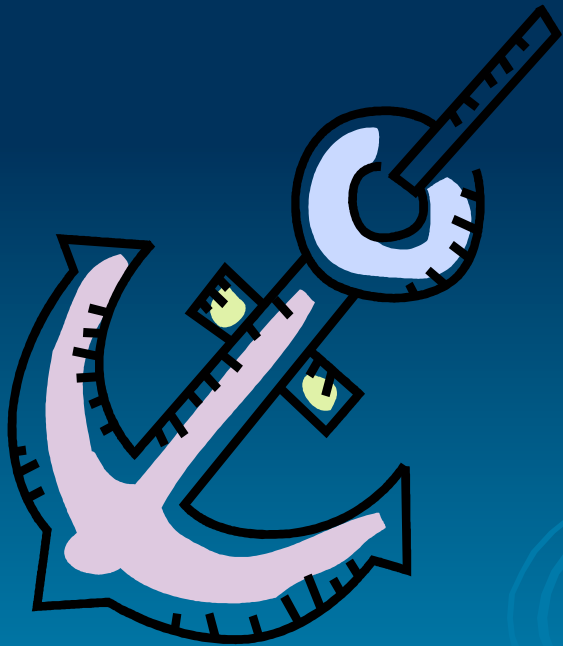


# Working Over & Around Water

NHA Southeast Regional Meeting

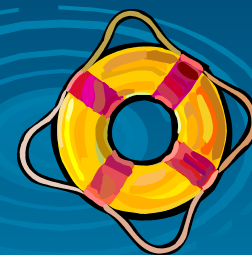
Dec. 3, 2008



# Working On, Over or Adjacent to Water Where Danger of Drowning Exists

---

- Many of the jobs maintenance employees are assigned involve working in close proximity to deep water.
- Some jobs are routine and the necessary safety precautions are well established.
- A large portion of the jobs are done very infrequently, once every 5, 10, 20 yrs and the safety hazards are not well known.



# How Do We Ensure Employees Are Safe?

---

- Alcoa and OSHA have well established standards for critical safety protocols such as Confined Space Entry, Electrical Safety, Lock Out/Tag Out, Fall Prevention & Machine Guarding but very little has been written that specifically addresses water safety.
- OSHA offers some guidance through the 1910 General Industry Standards and the 1926 Construction Standards & supplemental letters of interpretation.
  - OSHA 1910.132 requires that a hazard assessment be completed prior to the job, and derive a plan that includes the selection of the proper protective and rescue equipment that is deemed necessary to protect workers.
  - OSHA 1926.106 specifically covers work on or near water.

## **29 CFR OSHA - General Requirements - Personal Protection Equipment - 1910.132**

### **1910.132(d)**

#### **Hazard assessment and equipment selection**

##### 1910.132(d)(1)

The employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the employer shall:

##### 1910.132(d)(1)(i)

Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment;

##### 1910.132(d)(2)

The employer shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment.

## Regulations (Standards - 29 CFR)

### Working over or near water 1926.106

- Part Title: Safety and Health Regulations for Construction
  - Subpart: E
  - Subpart Title: **Personal Protective and Life Saving Equipment**
  - **Standard Number: 1926.106**
  - **Title: Working over or near water**
- 1926.106(a)
    - Employees working over or near water, where the danger of drowning exists, shall be provided with U.S. Coast Guard-approved life jacket or buoyant work vests.
  - 1926.106(b)
    - Prior to and after each use, the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.
  - 1926.106(c)
    - Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet.
  - 1926.106(d)
    - At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

## OSHA letter of interpretation: June 13, 1990

Response to the question about compliance with the requirements of OSHA Standard 29 CFR 1926.106(d), which reads as follows:

At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

To be considered in compliance with the aforementioned standard, **an employer must have a lifesaving skiff available that could, at the minimum, retrieve an employee from the water no more than three (3) to four (4) minutes from the time they entered the water. However, if there are any additional hazards, such as very cold water, rapids an employee could be swept into, etc., the lifesaving skiff would have to be able to retrieve an employee before they sustained injuries as a result of those additional hazards.**

In addition to the preceding, an employer is required to comply with all other applicable standards including, but not limited to, the requirements that an injured employee be treated by medical personnel or an employee certified in first aid within three (3) to four (4) minutes from the time the injury occurred. This could mean that first aid treatment would have to begin in the lifesaving skiff.

## OSHA letter of interpretation: December 6, 1991

29 CFR 1926.106(d) is a performance oriented standard, it is appropriate for OSHA to hereby establish the following criteria for determining when a lifesaving skiff is to be considered as being "immediately available":

- The skiff must be in the water or capable of being quickly launched by one person.
- There must be at least one person present and specifically designated to respond to water emergencies and operate the skiff at all times when there are employees above water.
- When the operator is on break another operator must be designated to provide the requisite coverage while employees are above water.
- The designated operator must either man the skiff at all times or remain in the immediate area such that the operator can quickly reach the skiff and get underway.
- The skiff operator may be assigned other tasks provided the tasks do not interfere with the operator's ability to quickly reach the skiff and get underway.
- The communication system, such as a walkie-talkie, must be used to inform the skiff operator of an emergency and to inform the operator where the skiff is needed.
- The skiff must be equipped with both a motor and oars.

With regard to the number of skiffs required and the appropriate maximum response time, the following factors must be evaluated:

- The number of work locations where there is a danger of falling into water;
- The distance to each of those locations; Water temperature; Currents;
- Other hazards such as, but not limited to, rapids, dams, and water intakes.
- The fact that, in the event a personal flotation device is not worn or malfunctions, permanent brain damage can occur in a drowning victim within three to four minutes of oxygen deprivation.

## OSHA letter of interpretation: December 10, 1998

The requirements in § 106(c) and (d) for ring buoys and a skiff address the hazard of falls that may occur in the event of a failure of the operation or use of the guardrails or fall protection devices. Therefore, **ring buoys and a skiff must be provided irrespective of the fall protection provided on the site.**

The provisions in § 106(a) and (b) requiring the provision and inspection of life jackets or buoyant work vests applies "where the danger of drowning exists."

This phrase is not used in § 106(c) and (d). The use of this phrase in § 106(a) constitutes a recognition that there are times when it is infeasible to provide continuous fall protection. During those periods, the lack of fall protection means that the workers face a direct danger of drowning.

**Consequently, we interpret § 106(a) and (b) as requiring these devices only when continuous fall protection is absent, however briefly.**



## OSHA letter of interpretation: September 28, 1999

When working above water, employers must provide fall protection, if the distance from the walking/working surface to the water's surface is 4 feet or more.

29 CFR 1926.501(b)(1) states that "each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) (4 feet according to 29 CFR 1910.23) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems." The preamble to the standard states the term "lower level surface" this includes liquids (Volume 59 of the Federal Register, page 40,681).

Therefore, employers must provide fall protection during work activities when employees are working 4 feet or more above the water.

The use of fall protection, including fall protection that eliminates drowning hazards, does not relieve employers from having to provide ring buoys and a lifesaving skiff under §1926.106(c) and (d).

The requirements in §1926.106(c) and (d) for ring buoys and a skiff address the hazard of falls that may occur in the event of a failure of the operation of fall protection devices or a lapse in their use.

Therefore, ring buoys and a skiff must be provided irrespective of the fall protection provided on the site.

# How Do We Ensure Employees Are Safe?

---

- It was determined that a water safety document was needed that would guide a supervisor through the process of:
  - Determining what standards apply
  - Help in identifying all the hazards
  - Indicate what safety precautions need to be in place.

# How Do We Ensure Employees Are Safe?

---

- In 2005 the APGI Safety Guidance Policy “*Working On, Over or Adjacent to Water*” was developed.
- Boating safety Safe Standard of Operation (SSOP) was developed.
- Boating Safety Training Module was developed.
- Boat operator proficiency certification implemented in 2007.

# ***WORKING OVER OR NEAR WATER***

---

- **WHILE WORKING OVER OR NEAR WATER, WHERE THE DANGER OF DROWNING EXISTS, EMPLOYEES MUST WEAR U. S. COAST GUARD APPROVED LIFE JACKETS OR BOUYANT WORK VESTS.**
- **PRIOR TO EACH USE, THE LIFE JACKET OR WORK VEST SHALL BE INSPECTED. DEFECTIVE PFD'S SHALL NOT BE USED.**
- **RING BOUYS WITH AT LEAST 90 FEET OF LINE SHALL BE PROVIDED AND READILY AVAILABLE FOR EMERGENCY RESCUE OPERATIONS. DISTANCE FROM THE BOUYS SHALL NOT EXCEED 100 FEET.**
- **AT LEAST ONE LIFESAVING SKIFF SHALL BE IMMEDIATLY AVAILABLE AT LOCATIONS WHERE EMPLOYEES ARE WORKING OVER OR ADJACENT TO WATER, IF THEY ARE NOT PROTECTED BY STANDARD HANDRAILS.**

<b>SAFE STANDARD OPERATING PROCEDURE</b>	<b>Page 1</b>
<b>Field Evaluation Checklist</b>	

**Purpose:** The safe standard operating procedure covers loading and unloading boats, including pontoon boats into and from the reservoirs. The procedure includes vehicle to trailer hook-up and operating boats safely. **This Field Evaluation (Hands-On Operation) Checklist is to verify that Yadkin boat operators are knowledgeable of boating regulations and water safety; and are qualified to safely operate boats.**

Black Text = Procedure	Red Text = Safety	Green Text = Environmental
Date:	Employee's Name:	Tested by:

**Title: SAFE BOAT UNLOADING, OPERATING and LOADING**

<b>Subject 1: PERSONAL PROTECTIVE EQUIPMENT REQUIRED</b>	<b>Procedure Followed (check)</b>	
	YES	NO
<b>A. Safety Glasses</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>B. Safety Toe, Metatarsal Guard Shoes</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>C. Hard Hats</b> (Required for work, but not necessary while driving or riding boat(s) to and from work site.)	<input type="checkbox"/>	<input type="checkbox"/>
<b>D. Personal Flotation Devices</b>	<input type="checkbox"/>	<input type="checkbox"/>

**Subject 2: VEHICLE TO TRAILER HOOK-UP**

**PRE-JOB TASKS:**

<b>A. Boat may be equipped with a transom drain plug. Make sure this plug is in place and tight.</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>B. Inspect the bottom of the boat and make note of all fittings below the waterline. Ensure none are loose or broken.</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>C. Check boat, motor and trailer for vegetation and removed before launching boat into water.</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>D. Check gas/oil tank(s) and lines for leaks, frays, cracks and breaks.</b>	<input type="checkbox"/>	<input type="checkbox"/>

**PROCEDURE:**

<b>A. Check behind the vehicle to make sure that no one or any obstacles are between vehicle and trailer.</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>B. Back vehicle toward trailer using approximate center of vehicle to align trailer hitch on vehicle with tongue of trailer. Put vehicle in park and set park brakes, then check for vehicle ball and trailer hitch alignment. Adjust vehicle to desired distance.</b> <b>Put vehicle in park, set park brakes, and shut off engine.</b> (Assistant can help align if available)	<input type="checkbox"/>	<input type="checkbox"/>
<b>C. (1) Check vehicle tube receiver making sure pin and cotter pin are installed through receiver tube.</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>(2) Check ball on receiver for tightness.</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>(3) Check ball size (normally stamped on trailer hitch).</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>(4) Match ball size on vehicle receiver with trailer hitch.</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Failure to use correct ball size can cause trailer to come unhitched from vehicle.</b>		
<b>D. Remove safety pin from latch on trailer hitch. Latch must be in up position. Slowly lower trailer hitch toward ball, by turning jack handle to lower trailer tongue while aligning ball and hitch. When trailer hitch has bottomed on the ball, push latch down; install the safety pin through the latch.</b>	<input type="checkbox"/>	<input type="checkbox"/>

**NOTE: Jack can be used to raise and lower tongue to get the latch to lock.**



# SAFE STANDARD OPERATING PROCEDURE

## Field Evaluation Checklist

**Title: SAFE BOAT UNLOADING, OPERATING and LOADING**

**Subject 3: BOAT LAUNCHING (Continued)**

**D. Check the boat for any through-the-hull fittings for sign of leakage into the boat. If any leaks are noted the boat should be removed from the water immediately for repair.**

--	--

**Subject 4: BOAT RULES and REGULATIONS (U. S. Coast Guard, North Carolina, Yadkin)**

**YADKIN BOATING and WATER SAFETY RULES**

Answered Correctly

	YES	NO	
1. Each occupant (employees, contractors and visitors) aboard any water craft while on water, including boats and barges with standard handrails, shall wear a Coast Guard approved personal flotation device.			
A. Prior to and after each use, the Personal Floatation Device shall be inspected for defects that might alter their strength or buoyancy. Defective units shall not be used.			
2. Each boat, including pontoon boats shall have on board the following items:			
A. A minimum of one Coast Guard Type IV throwing device ( <i>seat cushion</i> )			
B. One Life Ring Buoy with 90 feet of line ( <i>rope</i> ) attached			
C. A sounding device for alerting or alarm, whistle or horn.			
D. A minimum of one paddle.			
E. One Yadkin radio. ( <i>Tested to be sure radio is working properly.</i> )			
F. Minimum of one Coast Guard approved fire extinguisher Fire extinguisher(s) has current ( <i>monthly</i> ) inspection.			
3. Approved hardhats, safety shoes and eye protection are required while working aboard any craft, not necessary when traveling aboard a boat.			

**U. S. COAST GUARD BOATING and WATER SAFETY RULES** *Some*  
*rules listed in Yadkin Boating and Water Safety Rules that are the same or more strigent than the USCG rules will not be listed here.*