

cal boating adviser

Fall 2004

From the Director's Desk



We recently released the 2003 California Boating Safety Report, our annual study of California recreational boating accidents. In 2003, 963 accidents were reported, the highest annual total on record. These accidents involved 502 injuries (up from 468 in 2002) and 61 fatalities (up from 53).

One reason for the increase in accidents is improved accident reporting. We are also seeing a trend towards more towing sport-type accidents, as wakeboarding and kneeboarding

increase in popularity. Fishing-related fatalities also remained high.

While the number of PWC accidents rose only slightly, the number of PWC fatalities increased from 7 to 12, the highest number on record. In addition, 70% of the personal watercraft involved in accidents were borrowed or rented. This information will help us to tailor upcoming safety campaigns to reduce the number of boating accidents, injuries and fatalities in California.

To view the report online, visit our Website, at www.dbw.ca.gov.

Under SB 136, a joint legislative oversight committee will be reviewing the need for keeping our Boating and Waterways Commission, and will hold a public hearing in January 2005. Of course we will be advising them about how important it is to keep the commission going. The commission provides advice and consent to Cal Boating on our loan and grant boating facility projects.

Last year there were three reported boating-related deaths from carbon monoxide (CO) poisoning in California. There may have been more which went unrecognized as such, since boaters and even officials are just now starting to become aware of this danger in the marine environment. Last year we published a warning pamphlet and boat sticker on the dangers of CO in boating. You can view it on our Website or call (888) 326-2822 to order free copies. You can read more about the dangers of CO on page 5.

In July, I participated in the U.S. Coast Guard Auxiliary's commissioning of a new VHF marine-band radio network they created for Lake Shasta. The VHF radio network will enhance search-and-rescue efforts in the area of Lake Shasta, which is larger than San Francisco Bay and host to more than 1,000 houseboats alone.

In June, I attended a meeting of the Executive Board of the National Association of Boating Law Administrators, hosted

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Governor Appoints Four to Boating and Waterways Commission

On July 20, 2004, Governor Schwarzenegger announced the following appointments to the Boating and Waterways Commission:



Lenora Clark, 57, of Discovery Bay is a retired postmaster for the United States Postal Service and a member of the Ebony Yacht Club, where she was appointed as a delegate to the Pacific Inter-Club Yachting Association. Clark is also a member of the board of the Recreational Boaters of California.



Jon Fleischman, 36, of Irvine is the deputy director for public affairs and media relations for the Orange County Sheriff's Department and also a reserve deputy sheriff assigned to the Uniform Patrol and Harbor Patrol Divisions.



Dr. C.P. "Bud" Johnson, 68, of Long Beach, is the president and owner of Harborlight Enterprises Inc. in Long Beach.



H.P. "Sandy" Purdon, 61, of San Diego, is the president of H.P. Purdon & Company, Inc., a management firm handling San Diego tidelands marinas. Purdon is a member and past president of the California Marina Recreation Association and a member and past chairman of the San Diego Port Tenants Association.

The commission positions require Senate confirmation and the compensation is \$100 per diem.

The Governor also appointed former Department of Boating and Waterways Director Carlton Moore, 57, of Fair Oaks, as oil spill response administrator for the Department of Fish and Game. He has been serving as interim oil spill response administrator for DFG. This position requires Senate confirmation and the compensation is \$109,872. 

The Dangers of Cold Immersion

In the late 1800s, a Swedish ship with a crew of 13 foundered in the frigid waters of the North Atlantic. Fortunately, a passing ship came upon the scene, and all 13 were pulled from the water alive. A rendezvous was arranged for the next day with another ship that would take them home. In the meantime, they were given dry clothes and blankets, a hot dinner, plenty of brandy, and beds for the night. But by the following day, all of them were dead.

When the Titanic sank in 1912, rescuers arrived to find some passengers floating in the water, wearing life jackets, their heads

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Arnold Schwarzenegger

Governor

Michael Chrisman

Secretary for Resources

Raynor Tsuneyoshi

Director

Boating and Waterways Commission

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Warren Rumpf, Vice Chairman

Lenora Clark

Jon Fleischman

Dr. C.P. "Bud" Johnson

Robert Y. Nagata

H.P. "Sandy" Purdon

Editorial Staff:

David Johnson

Megan Standard

Deanna Sackett

Subscriptions & Address Changes:

(888) 326-2822 (toll free)

e-mail: pubinfo@dbw.ca.gov

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out of the water—and dead. At first, they were thought to have drowned, but medical examination later revealed they had died from hypothermia.

Hypothermia

Hypothermia is the life-threatening lowering of the body's core temperature due to exposure to cold. In the marine environment, the rapid onset of hypothermia can result from an accidental fall into the water, which conducts heat from the body 25 to 30 times faster than air. Even in triple-digit temperatures, prolonged exposure to water as warm as 50-59 in the Sacramento-San Joaquin Delta has resulted in hypothermia.

The typical victim is the boater, angler, or duck hunter who has no intention of going into the water and is unprepared for it. For water recreationists, knowing what to do in case of accidental cold water immersion is as crucial as learning rescue breathing and cardiopulmonary resuscitation (CPR*).

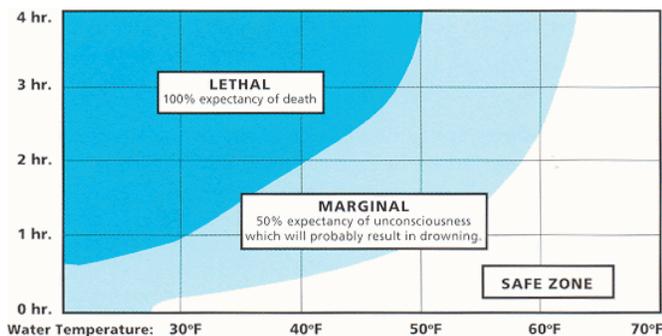
When boating in water colder than 50° F:

- Check the weather forecast before you go.
- Wear layered clothing (preferably woolen), a hat, and a life jacket.
- A float coat, wet suit, or dry suit may be necessary, depending upon the water temperature.
- Let someone know where you plan to go, and when to start looking for you if you haven't returned.

If you should capsize, stay with the boat, which is much easier for a rescuer to spot than a person bobbing in the water. If you can swim to safety, do so, but remember, distances in the water can appear deceptively short. If possible, get out of the water and on top of the boat. If not, assume a position with your head out of the water, knees up, and arms crossed over the chest, and remain still. The areas of critical heat loss are the head, neck, sides of the chest, and the groin. If more than one person is in the water, huddle together to decrease heat loss.

The length of time a person can survive in cold water depends on several factors: water temperature, body size, body fat, and activity level. Activity promotes heat loss, while keeping still can increase survival time by hours. This is one of many reasons why boaters should always wear a life jacket: The average person can survive for at least 2½ hours wearing a life jacket and remaining still in 50° F water. Without a life jacket, the physical movement necessary to avoid drowning will significantly decrease your survival time. Below is a chart showing predicted survival times in cold water.

Hypothermia Chart



In very cold water, after only a few minutes, the inner body temperature begins to drop, and hypothermia sets in. The blood vessels constrict to decrease the flow of blood to the surface in order to protect the core temperature. Early symptoms are shivering and numbness, due to this constriction. When the hands are cold, self-rescue becomes complicated by the inability to grip. The victim develops fatigue, a weak pulse, drowsiness, confusion, and slurred speech so that he may appear to be drunk, and he may even become combative. When the core body temperature drops below 90° F, loss of consciousness occurs; below 85° F, death follows.

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If you suspect a person is hypothermic, don't rely on the victim's judgment. Assess the situation, and get help if appropriate.

If the victim is conscious, making sense, and shivering, treat for mild hypothermia: Get the victim to shelter, replace wet clothes with warm dry clothing or blankets. Give warm, sweet, nonalcoholic beverages. Because the process of rewarming a hypothermia victim can be dangerous, seek medical assistance for moderate to severe cases of hypothermia.

For moderate or severe cases where medical assistance is not available: If the victim is not breathing, administer rescue breathing; if there is no breath or pulse, perform CPR. Get the victim to shelter and into dry clothing or blankets, but handle the person gently; rubbing the victim's skin or other rough handling may trigger ventricular fibrillation and cardiac arrest. If possible, immerse the torso (but not the limbs) in a warm (105° - 110° F) bath or shower, or pack hot water bottles and blankets around the torso. Warming the extremities or giving the victim alcohol can contribute to the danger of "after-drop" (see below).

If these options are not available, the recommended field treatment is to remove both your clothes and the victim's, and huddle together in a sleeping bag or under blankets. DO NOT give alcohol. According to some authorities, caffeine and nicotine should also be withheld, and giving a victim suffering from more than mild hypothermia anything at all to drink is inadvisable. If the victim has stopped shivering, the situation is dire, and wrapping the person in blankets without providing a source of heat will only keep them cold.

After-Drop

What killed the Swedish sailors? Before the complications arising from hypothermia were well understood, survivors of cold-water boating mishaps were commonly given the kind of care those sailors received. Often, victims cared for in this way seemed at first to recover, only to die from the effects of improper rewarming.

As we saw above, a hypothermia victim's blood is coldest in the constricted vessels of the extremities, which may be as low as 40° to 50° below the core temperature. If the victim is given alcohol, or the extremities are rewarmed too quickly, the constricted blood vessels expand, carrying cold blood back to the heart and lungs and further lowering the core body temperature, which can be fatal. In a medical setting, intravenous solutions and warm, humidified oxygen are administered, to slowly and safely rewarm the victim, from the inside outward. Even if it appears the victim has recovered, seek medical advice as soon as possible in moderate or severe cases, to preclude after-drop and other complications.

Cold Water Shock

Just as some presumed drowning victims actually died of hypothermia, some actually died of cold water shock. The shock of being suddenly immersed in cold water can kill before hypothermia has the chance, in any of several ways:

- One danger of cold water is commonly known as the "gasp reflex." This refers to the involuntary intake of air following a fall into cold water. If this gasp reflex occurs while the victim's head is under water, aspiration of water occurs, followed by drowning.
- Another danger is the "gag reflex," in which the larynx spasms, preventing air or water from passing into the lungs, causing asphyxiation; known as "dry drowning."
- Sudden immersion in cold water can trigger cardiac arrest.
- Cold water entering the ear canal can cause vertigo and disorientation, actually causing victims to swim down to their death, instead of up, toward safety.
- Cold water shock can cause hyperventilation, breathlessness, or irregular breathing, which contributes to fatigue and can result in swim failure or aspiration of water.
- A survivor of near-drowning should seek medical advice. Survivors have been known to die from fluid in the lungs as much as 36 hours after rescue.

The Mammalian Diving Reflex

The victim of cold water near-drowning may appear to be dead, with dilated pupils, cyanosis (blue skin pallor), and no detectable breathing or pulse. Yet many such victims have been revived with no lasting effects, even after as long as one hour under water. This is due to the Mammalian Diving Reflex, displayed by marine mammals like seals, and present in a weaker form in humans, especially young children.

When the Mammalian Diving Reflex is triggered, often by immersion of the face in cold water, blood is diverted from the arms and legs to circulate among the brain, heart and lungs. The heart rate slows to as low as 6 to 8 beats per minute. These physiological changes protect the brain from damage due to oxygen deprivation.

The younger the victim, the stronger the Mammalian Diving Reflex, but regardless of age, resuscitation should be started immediately on an apparent victim of cold-water drowning. In the laboratory, resuscitation of a human artificially cooled to 48.2° F has been successful, while accident victims with core temperatures as low as 64.4° F have been known to recover.

Learn Rescue Breathing and CPR from your local chapter of the American Red Cross. For a free, wallet-sized, waterproof Rescue Breathing instruction card, call DBW tollfree at (888) 326-2822, or order online at www.dbw.ca.gov. 

Carbon Monoxide is a Silent Killer in Boating

Last year, a dangerous new boating activity known as “teak surfing” claimed the lives of three California boaters. Boating safety officials are concerned that the number may be higher, as some deaths may have been attributed to other causes, such as intoxication or heart attack. On Feb. 18, 2004, Assembly Member Paul Koretz introduced AB 2222 to make this activity and other behaviors that expose recreationists to CO poisoning illegal. As of September, the bill was on the Governor’s desk for his consideration.

AB 2222 would require DMV to distribute DBW CO warning pamphlets and stickers to boat owners, and would require boat manufacturers and dealers to provide them with new and used boat sales.

“Carbon monoxide is colorless and odorless, and it may be surprising that it can be a danger in the open-air environment,” said Raynor Tsuneyoshi, Boating and Waterways Director. “But that’s why we’re trying to get the word out.”

Recent U.S. Coast Guard advisories warn that boaters have been poisoned by carbon monoxide while setting fishing lines or performing maintenance on their boats while the engine was running. But a new fad that has taken a toll nationally has made its way to California: “teak surfing” or “drag surfing”. This activity involves clinging to the swim platform or transom of an underway boat, then letting go and body surfing. In addition to the danger of propeller injury, teak surfers risk drowning.

Exposure to engine exhaust can cause a teak surfer to faint, and if not wearing a life jacket, which interferes with body-surfing, to drown.

Many boaters are aware that carbon monoxide is a danger in enclosed spaces when using on-board generators, heaters and stoves. But the gas can also accumulate in areas around and under a motorboat’s swim platform. Cal Boating participated in a CO test on a late-model motorboat with a properly tuned engine during light breeze conditions at Folsom Lake. Thirty seconds after the engine was started, the CO level in the air around the boat’s transom was 200 parts per million. After less than a minute, the reading had climbed to 990 ppm. According to the World Health Organization, a level exceeding 87 ppm during a 15 minute interval is considered dangerous.

If the CO reading of a boat’s engine can reach a dangerous level after less than a minute, it is easy to see that the amount of CO a teak surfer is exposed to over the span of even an hour’s activity is dangerously high.

The symptoms of CO poisoning may include severe headache, dizziness, confusion, nausea, fainting and death. Low levels can cause shortness of breath, mild nausea, and mild headache. Low levels can be more dangerous in the boating environment as they can lead to drowning. Carbon monoxide poisoning may not be immediately suspected since symptoms may be similar to those of the flu, food poisoning, or other illnesses. If CO poisoning is suspected, get the victim fresh air immediately and seek medical care.

To view or order free copies of information on CO poisoning, including a pamphlet and warning sticker for placement near your boat engine, visit the Department of Boating and Waterways Website, at www.dbw.ca.gov. 

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by NASBLA member territory U.S. Virgin Islands, in St. Croix. Hot topics on the national front that the Board took up include the federal government potentially making life jacket wear and boating safety education mandatory for all states. The National Marine Manufacturers Association and the National Personal Flotation Device Manufacturers Association have agreed to try to increase life jacket wear from the current 22% level to 44% over the next two years. If this goal is not achieved, the federal government may introduce legislation to make life jacket wear mandatory on boats under 21 ft. in length. The Board also heard an update on federal Wallop-Breaux funding, which is being considered as part of two proposals wending their way through the U.S. Senate and the House of Representatives. The question must be resolved in the conference committee between the two houses by the end of June.

In May, I attended the Western States Boating Administrators Association Conference in Friday Harbor, Wash., where I presented the Western Boating Law Administrators Association’s President’s Award to Dolores Farrell, DBW Operations Division Chief (please see the related story and picture in this newsletter).

In April, I attended the National Association of Boating Law Administrators Waterways Management Committee held in conjunction with the Boating and Water Safety Summit in Panama City, Fla. One of the hot topics was waterways resource management and use conflicts among various waterway users such as water skiing, fishing, motorboat operation, etc. The Waterways Management Committee is wrapping up work on a Waterways Resource Management Handbook, which will be published soon. I also attended the National Boating Safety Advisory Council Spring Meeting in Norfolk, Virg., where I chaired the Prevention Through People Subcommittee. There also, the two hot issues were mandatory education and mandatory life jacket wear. 

Awards

Recently, DBW Director Ray Tsuneyoshi presented a variety of awards to various DBW staff and others involved in boating safety:



Sonoma County Sheriff's Deputy Dale Walters nominated for NASBLA Boating Officer of the Year pictured with Sonoma County Sheriff Bill Cogbill.

National Association of State Boating Law Administrators Boating Officer of the Year

Sonoma County Sheriff's Deputy Dale Walters was at Steel Head Beach on the Russian River on May 25, 2003, preparing his jet boat for patrol. Dale heard a distant call for help, and noticed two males floating down the river where the water was deep and swift. One man was treading water and calling for help and the other was face down in the water and unconscious. Dale ran to the shore, removed his gear, dove and started swimming across to the men.

Shortly after that, a passerby also entered the water to assist. Dale made it over to the victim and immediately turned him face up in the water. The passerby assisted Dale while all three floated down the river. The water was too deep to gain a stable footing and the victim remained unconscious. After some distance Dale and the passerby were able to grab onto some tree branches and stabilize themselves. At this point both Dale and the passerby were certain the victim, a 17-year-old Hispanic boy was deceased. During the summer of 2004 five other Hispanic males drowned in the Russian River. Dale held the victim and the passerby administered two back blows to the subject. In their minds, there was nothing to lose.

The victim started breathing again. The man was floated across the river by kayak to awaiting ambulance, taken to hospital, and released the next day.

DBW's Operations Chief, Dolores Farrell, Wins WSBAA President's Award

Dolores Farrell, DBW's Operations Div. Chief, received the WSBAA President's Award from Cal Boating Director Raynor Tsuneyoshi, who said, "I am extremely pleased and very proud to be presenting this award to Dolores."

Dolores manages the Education, Safety, Enforcement Subvention and Training, and Yacht and Ship Broker Licensing units. Since she first joined the Department in 1993, Dolores has overseen the award-winning updating of the mandated aquatic safety curriculum for children in grades K-8; the expansion of the Annual Accident Study; the development of one of the first PWC courses for law enforcement; an extensive, outdoor and radio safety promotional campaign; the technological updating of the database of Yacht and Ship Brokers Licenses; the renewal of our outreach programs for Spanish speakers; the establishment of the award-winning Safe and Wise Water Ways poster contest.

CSUS' Brian and Cindi Dulgar Receive NBEAA Award

The National Boating Education Advancement Awards were established by the National Safe Boating Council (NSBC) and sponsored by Coors Brewing Co. The awards are designed to recognize the outstanding efforts of individuals and organizations who have developed and implemented new and innovative boating education programs that address some of the major safety concerns of today's vessel operator.

Brian Dulgar, Center Director and Cindi Dulgar, program instructor and youth program coordinator, with the California State University at Sacramento Aquatic and Boating Safety Center, received the NBEAA award for their outstanding boating educational programs which promote safety, and the themes of the NSBC and the National Safe Boating Week campaign; enhance the image of boating safety efforts; share these success stories with others for the improvement of boating across our nation and the world; and create a closer partnership among national, state, and local boating education organizations.



Brian and Cindi Dulgar, with the CSUS Aquatic & Boating Safety Center, receiving the BEAA award from Deanna Rice, Coors Brewing Co., and Bill Griswold, NSBC Chairman.

Water Safety Congress Awards

The National Water Safety Congress is a nonprofit organization that has promoted water safety in the United States since 1951.

Bob Bense

Bob Bense, a VP with Correct Craft, provided DBW invaluable assistance when the water ski video "On the Line" was updated to include towing sports such as wakeboarding, kneeboarding, and innertubing. He helped to securing talent and provided boats for the shoot. Bob was instrumental in developing the video's carbon monoxide information and Correct Craft was ahead of the curve in providing warning stickers for boat transoms. Both Bob and Correct Craft are to be commended for their boating safety education efforts.



Phaedra Bota

For more than a decade, DBW has partnered with the U.S. Army Corps of Engineers on the common goal of boating safety education. The Corps recognized the DBW Education Unit's Phaedra Bota for her outstanding contributions to their water safety programs.

Phaedra coordinates the distribution to Corps Lakes of educational material and safety promotional items, including two radio and TV PSA's in English and Spanish which have served millions of visitors to Corps lakes. The Corps' Sac. Dist. attributes last year's decrease in drownings to its safety partnership with DBW.

Keith Rogers

For the past decade, Keith Rogers with CSUS's University Media Services has been working with DBW to produce the AquaSMART curriculum videos, assisting DBW in teaching more than 5 million California school children how to stay safe in and around the water.

Keith's work has stretched across state and national boundaries. The states of Oregon and Texas, and countries such

as Italy and Australia, have adopted parts of the AquaSMART series.

In 2003, Keith worked on several projects for Cal Boating, including a water skiing and tow-sports video for aquatic centers, a revision of the AquaSMART program for grades K-2, and a marine enforcement instructional video.

Bruce Clarke

Bruce Clarke and his graphics staff at CSUS's University Media Services have been working with Cal Boating since 1994 to produce quality, award-winning aquatic and boating safety outreach materials.

Bruce is a photographer and designer whose photos have appeared on a number of boating safety posters and brochures from Cal Boating. One of these photos received a silver award from the State Information Officers Council (SIOC). Many of the other products Bruce and his team produced have also received awards from SIOC.

Thanks to Bruce and the University Media Services team, the aquatic safety message has reached more than a half-million California residents annually.

Accounting Unit

Last but not least, Director Tsuneyoshi presented Sandra Eaton, Supervisor of DBW's Accounting Unit, the State Controller's Award for Achieving Excellence in Financial Reporting. 

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Department of Boating and Waterways
2000 Evergreen Street, Suite 100
Sacramento, CA 95815-3888

