



Making sure that beach users have a safe and fun day at the beach is a common goal for most coastal communities. Most beach areas have to allow driving on the beach. This may be solely the marine safety/lifeguard staff, or it may include many types of drivers, such as maintenance staff, law enforcement, concessionaires, contractors, and vendors. Each group of drivers present specific needs and require specific direction on how to safely drive on or near a sandy beach.

**If at all possible, don't drive on the beach. Is this trip necessary?** Can it be postponed to a time when beach population is lower? Can trips be consolidated, or done early in the morning before general public use?

- **A written beach driving policy or ordinance is needed, approved by the appropriate bodies.**
  - The policy/ordinance should be all inclusive. If, for instance, access to the beach is governed by a railroad crossing, make sure the policy includes specific reference to at-grade crossings and the safe procedure for use.
  - **Ongoing training and peer directed training for new staff is imperative.** Remember those that enforce policy need not only to know the policies, but also follow them.
  - **Require ALL beach drivers to study the policy**, and take whatever appropriate measures to test any potential beach drivers. Remind all potential beach drivers that their ability to drive on the beach can be taken away should they violate the beach driving policy/ordinance. Strictly enforce your policies/ordinances.
  - If your beach area features concessions or businesses that require deliveries of goods, make certain that those individuals entering the beach areas are educated on beach driving. Substitute drivers may not have done the same route in the past and will require additional observation.
- Most drivers can be taught the specific skills of operating a vehicle safely, but it is **a driver's attitude that may well be the most important factor in safe driving**. Some faulty driver attitudes are over confidence; impatience; and preoccupation. In contrast, with the proper attitude, safe drivers take no chances; they are not in undue hurry; and they develop the ability to concentrate at the important task at hand. Above all, the prevailing attitude of a good driver is that "if an accident is to be avoided, it is up to me to prevent it". To develop the proper skills, drivers must study, question those more experienced, and apply themselves in practical and written testing. The best way to develop these skills into valuable experience is to practice them with the proper attitude.
  - **Driving on sand is much different than driving on the street.** The difference becomes even more pronounced with 10,000 people, high tide and soft sand. It is, at times, tricky driving but can be done without incident, if you move cautiously. Driving safely always comes first. To the unit operator there is no higher priority, nor is there a situation in which your agency can incur greater liability than if there is an accident involving a beach vehicle. It is never enough to drive so cautiously that you know you won't hit someone; you must drive so slowly and carefully that everyone on the beach knows you won't hit someone. Always try to let people know you see them by making eye contact
  - **Be patient.** Being in a hurry may cause drivers to go too fast and drive in a way that may lead to an accident.



- Drive on the beach in such a manner as to ascertain 360 degree vision with full awareness of surroundings and to **be in visual contact with beach users, other operators and drivers. If this is not possible, then the beach is too crowded for driving.**
- **Standard procedure for maintenance vehicles driving on the beach is to have headlights and any warning lights on, and to drive slowly at approximately five miles per hour.**
- All drivers need to be aware of the quality and conditions of the beach areas where they will be driving. Being aware of and being trained to drive near drop offs, soft sand and other beach hazards is a highly important component of appropriate and safe beach driving. **The topography of the beach can change in a matter of minutes**, and drivers need to be aware of these changes.
- **Know your tides.** The best laid driving plans are immediately altered if you find your vehicle taking on water.
- **Avoid driving in wet sand.** Driving in wet sand has a direct impact during grunion season, and vehicles and electronics do not benefit from contact with the salt water.
- **Most beachgoers have no expectation of encountering a vehicle at the beach and most often do not pay attention even when they do see one.**
  - When someone is crossing your path, stop a good distance (75 feet) away, let them cross, then proceed. Don't pull right up to them and stop. They will feel that they just missed being hit.
  - With the noise of surf and thousands of people, vehicles may not be heard by beach users. Even adults may walk into a vehicle's path. Beach drivers must keep their eyes on the vehicle's path at all times. Many experienced drivers take their foot off the accelerator and place it above the brake pedal to decrease reaction time.
  - When driving next to walls, trees, buildings or other beach amenities, drive as though someone is about to step out in front of you. Watch for people that may be hidden from view by steep berms or cusps along the water line.
  - **Remember that some people like to be buried in the sand.** Some people may even cover the part of their body not buried in sand with a covering such as a towel. Therefore, never straddle such potential body covers with the vehicle.
  - Children present the greatest danger when driving on the beach because they often make sudden and unexpected moves. Children also are difficult to see in a vehicle's blind spot.
  - You may occasionally have to drive through areas of beach which are strewn with children's toys. If in a hurry, it is better to straddle the toys with the vehicle's tires than to be forced to pass too close to people.
  - Also remember that beach users may have concerns that may seem contradictory. They may be oblivious to the twenty ton loader working on the beach right next to them, but instead have concerns about the dump truck a half mile away.



- **Know your route; plan it ahead to avoid getting bottle necked in an unsafe position or having to backtrack. Use consistent routes for the public's convenience.**
  - **If at all possible, position vehicles so that there is no need to back up.** Beach drivers must look all around and under their vehicle before driving away and never back up when rear sight visibility is limited in any way. Placement of four traffic cones at each corner of a parked vehicle assists in reminding drivers to make this type of check when they remove the cones to leave.
  - **Avoid right turns.** Right turns have limited visibility for the driver, where left turns allow vastly greater visibility.
  - Drivers need to **exercise great caution when driving near beach rock cobble.** It is impossible to gauge the depth of piles of cobble from the driver's seat. If a vehicle becomes stuck in cobble, gunning the engine will only bury the vehicle deeper. Avoid driving in cobbled areas if at all possible.
  - **Piles of kelp must be avoided.** It is impossible to gauge the depth or composition of piles of kelp from the driver's seat. Children often play in or around piles of kelp.
  - If your beaches feature access roads, **limit driving** by contractors, maintenance staff, vendors, etc. to these areas.
  - If your beaches feature at-grade railroad crossings, make certain all drivers are trained in the proper procedures and placement of vehicles using these crossings.
  - At-grade railroad crossings, vehicles and pedestrians can be a dangerous mix. When exiting or entering a beach through an at grade railroad crossing, particular care should be taken to recognize that pedestrians will be more focused on trains than your vehicle.
- **Environmental concerns have a major impact on beach driving.**
  - **Avoid driving and turning vehicles on the high tide/wrack line** year round, as these areas represent hot spots of life, biodiversity and prey for shorebirds. Special emphasis should be given to avoiding driving on the wrack line during grunion season (roughly March through August). The wrack line, or tidal wrack, is the line of dead or dying seaweed and other debris left on the upper beach by the last high tide. This is the area where grunion breed. If crossing the wrack line is necessary, try to return using the same route so as to minimize impact on the grunion areas.
  - Some beach areas feature protected wildlife, quite often avian. **Drivers should be educated as to the exact locations of any protected wildlife.** One example is the snowy plover. During their nesting season, all care must be taken to not drive in the nesting areas.
  - **Avoid flushing roosting seabirds, gulls and shorebirds with vehicles.** Don't drive through roosting or foraging flocks and proceed very slowly in the vicinity of flocks of birds on the beach. Avoid staring or pointing directly at birds.
  - **Other areas may feature endangered plants. Again, all drivers should be familiar with the locations.** These areas should be totally avoided by beach drivers.



- **Avoid driving on vegetation and zones where seedlings are sprouting** (coastal strand zone= above high tide line and below primary foredune).
- **Avoid driving on embryo dunes and hummocks in the coastal strand and dunes.**
- **Establish and use one path/road** through vegetated zones of beaches and dunes as much as possible to reduce extent of impacts.
- Driving over berms may be part of your beach issues. Plan ahead to **avoid having to cross berms**. Driving over berms can be dangerous because:
  - The berm, as well as the vehicle's hood, can obscure the driver's vision.
  - Crossing up and over a berm usually requires the operator to accelerate.
  - Berms will usually cause the vehicle to side slip a certain amount.
  - People may congregate at the base of a berm because it serves as a windbreak or backrest.
  - Children often like to play around berms, especially by digging holes into them.
- Driving up berms presents different challenges. **Never climb up a berm without first looking to assure the path is clear**. There are several ways to get a good look:
  - Drive high on the up slope and parallel to the berm at an elevation that allows you to see over the berm crest to the beach behind it.
  - Drive straight up the berm, stop just below the crest, and then sit high in the seat to see the whole beach above the berm. If you can be assured that the area will remain clear, you can back down and then come back over the berm.
  - If you have a passenger, have them get out to check while you approach as above.
  - **The safest way is to always get out of the vehicle and look.**
- Some points to remember to make climbing a berm easier and safer:
  - **Reach the required speed before you start climbing.** As you climb you don't have to go faster, just give more throttle to maintain speed.
  - **Avoid turning your wheels so sharply that they plow sand.** Instead, make the turn below and straighten your wheels while climbing.
  - **Avoid berms with a hard crest;** they can damage the vehicle.
  - **Never make a U-turn over a berm;** severe vision limitations are inherent in this maneuver.
  - Always try to climb a berm in a coned area, but never rely on the cones to keep people clear of your path.



- Driving down berms is equaling challenging. Never drive down a berm without having first seen what is below it. There are several ways to get a good look:
  - Drive parallel and north (so the driver is closest to the edge) along the berm, but not so close as to collapse it. This should give you a good look at what is below. Then, if you are sure no one has entered the area, you can turn around and descend at the spot you checked.
  - The safest way is to get out and look.
  - Always be aware of signs of digging where someone might have dug a hole in the side of the berm, hiding him or herself from view.
  - The easiest way to get down a vertical berm of 2' or less is: After checking for people as above, drive slowly to the edge and apply the brakes just as the front tires reach the crest. You may have to pump and release them a few times. The object is to break down the berm and form a ramp for the vehicle. Go slowly until the rear bumper has cleared the berm.
  
- **There is an excellent DVD by the United States Lifesaving Association on Beach Vehicle Operations** at <http://www.uniservinc.com/usla2/>

## Glossary of terms:

At-grade crossings: Railroad crossings, often shared by pedestrians and vehicles

Berm: the ridge above the high tide mark. A natural or formed ridge or flat platform

Drop offs: areas of the beach that feature often dramatic grade changes created by erosion or surf

Grunion: California grunion are a species of marine fish found only along the coast of southern California and northern Baja California that spawn completely out of the water and lay their eggs on many sandy beaches in California.

Kelp: Any of various brown, large seaweeds

Rock cobble: a natural rock fragment, often rounded by the waves

Wrack line, or tidal wrack: The line of dead or dying seaweed and other debris washed onto the upper beach by the tides

**Disclaimer:** *This BMP is advisory in nature and meant to be a starting point for developing protocols, not the final word. The general information has been reviewed by beach managers and scientists and is considered acceptable practice. Each organization must develop appropriate guidelines according to its own specific needs and conditions.*