



United States Lifesaving Association

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Guideline: Beach Emergency Vehicle Operations

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Introduction

Beach emergency vehicles (BEV) are four-wheel-drive motor vehicles which are legally permitted to drive on streets and highways. They have been used by aquatic rescue agencies for many decades. Beach emergency vehicles expedite responses to people in distress, carry necessary rescue and medical aid gear, can be used as mobile command posts, and facilitate expeditious evacuation of the ill and injured. They can also be used to transport personnel, gear, and boats. In rare situations, BEV can be a source of injury to aquatic rescuers and beach patrons, especially when operated by those lacking proper training.

Due to the absence of nationally recognized guidelines for the use of beach emergency vehicles in open water rescue, the United States Lifesaving Association convened experts in this field from organizations with extensive experience in their use. This included lifeguard agencies which have created extensive curricula and training programs that have proved beneficial.

These guidelines represent USLA recommended minimum standards for the use of motor vehicles by beach lifeguards and other aquatic rescuers. They do not represent a comprehensive course of instruction. The USLA encourages agencies to exceed these minimum standards, particularly in areas where the use of motor vehicles exceeds the norm, such as extensive street and highway driving. Adaptation to local circumstances, laws, and regulations is essential to the success of any motor vehicle response. Therefore, within these guidelines, training should be

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adapted to local conditions. Those trained under the guidelines should be considered fully qualified for the conditions experienced by the agencies who conduct the training.

Guidelines

1. Steps to Certification

The steps to certification by a lifeguard agency or Aquatic Rescue Response Team and the rules of this certification program are the same as delineated in USLA Guideline 001 and Guideline 002, respectively, which can be found on the USLA website at: www.usla.org/guidelines. They are incorporated here by reference.

2. USLA Certification Officer

The standards for a USLA Certification Officer, who will review and evaluate applications for certification, are the same as delineated in USLA Guideline 001, which can be found on the USLA website at: www.usla.org/guidelines. They are incorporated here by reference.

3. Beach Emergency Vehicle Instructor

The following are standards for instructors of beach emergency vehicle operations training programs conducted by lifeguard and ARRT agencies. These are the standards for lead instructors. This does not preclude the use of assistants, field training officers or others who do not meet these standards. Lifeguard emergency vehicle instructors are directly responsible for ensuring that standards are met and that all training modules are taught by persons with proper credentials.

3.1. Required

- 3.1.1. Work Experience – Must have worked a minimum cumulative total of 2,000 hours of employment compiled in no fewer than five seasons as a seasonal open water lifeguard or a full-time open water lifeguard at a lifeguard agency which meets the standards of USLA.
- 3.1.2. Beach Emergency Vehicle Operation Experience – Must have at least 1,500 hours experience assigned as a Beach Emergency Vehicle Operator at a lifeguard agency certified by the United States Lifesaving Association.
- 3.1.3. Age – Must be at least 21 years of age.
- 3.1.4. Licensure and Training Credentials – Must be properly licensed and/or credentialed, as may be required in accordance with law and/or regulation, to provide the training.
- 3.1.5. Driving Record – Must have demonstrated proof of a safe driving record based on a check of driver license history.
- 3.1.6. Emergency Vehicle Operations Course – Completion of an emergency vehicle operations course.

4. Beach Emergency Vehicle Operator

A Beach Emergency Vehicle Operator (BEVO) is a person designated the responsibility of operating an agency's assigned emergency vehicles. A BEVO oversees, maintains, and is

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responsible for the vehicle, which may include daily upkeep and maintenance, stocking of rescue equipment, and safe operation. After successfully meeting all standards and completing required training, as well as agency standards, the BEVO must successfully meet all annual requirements and recertification set forth by the USLA for open water rescuers as well as any and all annual requirements set by the employing agency to maintain BEVO status.

4.1. Required

- 4.1.1. Minimum Age – 18 years
- 4.1.2. Qualifications – Successful completion of a course in open water rescue conducted by an agency certified under the USLA Lifeguard Agency Certification Program or Aquatic Rescue Response Team guidelines; ongoing maintenance of minimum requirements specified by the USLA; and recurring training specified by the USLA.
- 4.1.3. Experience and Preparedness – Demonstrates adequate maturity and lifeguard experience, in accordance with agency policy, to safely take on the significant responsibility of operating an emergency vehicle on a beach, considering that it will be populated with beachgoers who may not anticipate the presence or movement of emergency vehicles.
- 4.1.4. Licensure – Must be properly licensed and/or credentialed as required in accordance with law and/or regulation to operate the vehicle for which training is provided.
- 4.1.5. Training – Successful completion of a course of no less than 24 hours in beach emergency vehicle operations in a course that meets the minimum requirements of this guideline.
- 4.1.6. Skills Demonstration – Operates only under the immediate supervision of an experienced BEVO, supervising from the passenger seat of the vehicle, until it is determined that the trainee is fully competent to safely operate without immediate supervision.
- 4.1.7. Driving Record – Demonstrated proof of a safe driving record based on a check of driver license history.

Recommended:

- 4.1.8. Emergency Vehicle Operations Course – Completion of an emergency vehicle operations course.

4.2. Standards to be Met and Maintained

- 4.2.1. Must be currently employed by a USLA certified agency and meet all required standards for open water rescuers.
- 4.2.2. Successful completion of sixteen (16) hours of annual refresher training conducted by a Beach Emergency Vehicle Instructor as defined in this guideline.

5. Beach Emergency Vehicle Equipment

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5.1. Required

- 5.1.1. Emergency warning lights in accordance with state requirements
- 5.1.2. Siren and public address system
- 5.1.3. Decals or other markings to indicate the name of the agency and other appropriate information, such as “Lifeguard” (Note: Not required for supervisory vehicles or other vehicles which may need to be intentionally discrete)
- 5.1.4. Back-up alarm
- 5.1.5. At least one rescue floatation device (RFD) for each lifeguard assigned to the vehicle
- 5.1.6. Mask(s), snorkel(s), and swim fins readily accessible to mount an underwater search and rescue, as appropriate
- 5.1.7. Binoculars
- 5.1.8. Marker buoy(s) readily accessible for submerged victim search and rescue
- 5.1.9. A medical aid kit adequate to treat both minor and major medical emergencies
- 5.1.10. Equipment to protect against bloodborne pathogens consistent with OSHA requirements
- 5.1.11. Spinal stabilization equipment, including spineboard, head and neck immobilization devices, and fastening devices
- 5.1.12. Oxygen
- 5.1.13. Equipment for responders to communicate with the public at a distance (ex: public address system)
- 5.1.14. Two-way radios or similar equipment for rescuer to rescuer communication
- 5.1.15. A system for documenting activities, consistent with USLA standards and agency policy
- 5.1.16. Knife or shears appropriate for use in the aquatic environment for cutting lines and related uses
- 5.1.17. Blanket

5.2. Recommended

- 5.2.1. Cardiac defibrillator
- 5.2.2. Forward alarm to warn beachgoers when moving forward at speeds that do not require use of a siren

Resource Material

Required for All Students:

- **Open Water Lifesaving – The United States Lifesaving Association Manual (3rd Edition)**, *United States Lifesaving Association, B. Chris Brewster - Editor, ISBN 978-1-323-58456-9*
- **Beach Vehicle Operations Video – The United States Lifesaving Association**
- **Vehicle specific owner’s manual for vehicles assigned**

Recommended:

- **Local and/or state regulations for emergency vehicle operations**
- **Emergency vehicle operations course (EVOC) per state regulations**

Curriculum

Terms

Identify – The instructor provides a full explanation to candidates and takes steps to validate their comprehension and retention

Demonstrate – The instructor shows the candidates how to perform a skill the proper way so that the candidates can adequately perform it themselves

1. Vehicle Introduction and Maintenance

Knowledge Objectives

1.1. Identify emergency response vehicles used by the agency, their mechanical components, their features, and their capabilities, including, but not limited to the following.

- Four-wheel drive activation
- Locking differential (if available)
- Low gear
- Emergency light activation
- Siren activation
- Backup alarm activation
- Two-way radio
- Racks, straps, tie-downs
- Storage boxes and their contents
- Emergency equipment
- Trailer hitch
- Trailer lights connection

1.2. Vehicle Upkeep and Maintenance

- Identify the need to ensure that fluids and tire air pressure are maintained and how to do so.
- Identify basic maintenance the agency expects responders to perform.
- Identify basic troubleshooting.

1.3. Vehicle Inspection and Checklist

- Identify the value of pre-use vehicle inspections and system checks
- Identify vehicle checklists used by the agency
- Identify functions of agency vehicles (4WD, locking differential, low gear, etc.)

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1.4. Scene Safety

- Identify scene safety considerations when arriving at an emergency

1.5. Parking Protocols

- Identify beach and street parking protocols for the agency

1.6. Vehicle Accidents

- Identify the legal responsibilities of the driver in the event of injury and non-injury accidents
- Identify agency policies regarding vehicle accidents

Skill Objectives

1.7. Vehicle Knowledge

- Demonstrate emergency vehicles used by the agency, their components, and how to utilize their key components
- Demonstrate entering the vehicle, utilizing all controls, starting the vehicle, moving the vehicle, stopping the vehicle, and exiting the vehicle
- Demonstrate operation of emergency lights, siren, public address system, two-way radio

1.8. Vehicle Maintenance

- Demonstrate the conduct of maintenance required by the agency

1.9. Pre-Use Vehicle Inspections and Checklists

- Demonstrate pre-use vehicle inspections
- Demonstrate completion of vehicle checklists used by the agency

2. Defensive Driving – Beach emergency vehicle operators need to know the importance of defensive driving principles and techniques in order to develop safe driving habits.

2.1. Components of Defensive Driving

Knowledge Objectives

- Identify a safe distance when following another vehicle
- Identify the effect of speed on a driver's peripheral vision
- Discuss how reaction time lapse affects vehicle stopping distance
- Identify potential hazards of operating a vehicle in reverse and appropriate actions to prevent collisions
- Identify the importance and proper use of safety belts and other occupant restraint devices in a public safety vehicle
- Identify hazards of varied road and weather conditions
- Identify physiological and psychological factors which may affect a beach emergency vehicle operator's driving

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Skill Objectives

- Demonstrate vehicle warning devices (beepers, etc.) and identify their use
- 3. Vehicle Dynamics – Beach emergency vehicle operators must be proficient in the operation of the vehicles used by the agency, and know the dynamic forces at work. Proper steering control, throttle control, speed judgment, and brake use enhances driving expertise.

3.1. Vehicle Dynamics

Knowledge Objectives

- Identify the difference between longitudinal and lateral weight transfer
- Identify spring loading
- Identify the strengths and weaknesses of different types of vehicles when used as emergency response vehicles (e.g. pick-up truck, SUV)

3.2. Vehicle Control Techniques

Knowledge Objectives

- Identify the causes and contributing factors of vehicle hydroplaning
- Identify the primary effects speed has on a vehicle in a turning maneuver
- Identify the causes of the following types of vehicle skids: understeer skid, oversteer skid, locked-wheel skid, and acceleration skid

Skill Objectives

- Demonstrate proper techniques for two-handed shuffle steering
- Demonstrate proper throttle control
- Demonstrate proper roadway position and the three essential reference points of a turning maneuver
- Identify and demonstrate proper braking methods

3.3. Vehicle Angles

Knowledge Objectives

- Identify following types of vehicle angle: approach angle, departure angle, break-over angle
- Identify hazards of step driving angles
- Identify how angles effect how a vehicle operates

- 4. Beach Driving – Beach emergency vehicle operators must recognize that driving in the beach environment demands a high level of concentration, awareness of the public, and quick reactions.

4.1. Operating Vehicles in the Beach Environment

Knowledge Objectives

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- ❑ Identify the objectives of beach driving – to patrol and respond safely, effectively, and efficiently
- ❑ Identify safe patrol speeds and agency policy regarding beach driving speed
- ❑ Identify the environmental hazards of beach driving and appropriate reactions to prevent mishaps (getting stuck, running something over, etc.)
- ❑ Identify ways to deal with a vehicle that becomes stuck
- ❑ Identify the need to consider surf and tides when operating and parking a vehicle on the beach

4.2. Vehicles and Beachgoer Safety

Knowledge Objectives

- ❑ Identify the challenge of driving in an environment where people may not expect vehicles
- ❑ Identify the need to use particular caution around children
- ❑ Identify the unusual ways in which beachgoers sometimes react to vehicles operated on the beach
- ❑ Identify and demonstrate blind-spots for each vehicle used by the agency
- ❑ Identify the possibility that beachgoers may sit or lie down near a vehicle, including in blind-spots, even when the vehicle is stopped for only a short period and the need to thoroughly ensure that the surrounding area is clear before moving the vehicle
- ❑ Identify the way that elevations, such as sand berms, can worsen blind-spots
- ❑ Identify the desirability of making left turns, where possible, to reduce the impact of blind-spots

Skill Objectives

- ❑ Demonstrate blind-spots for each vehicle used by the agency
- ❑ Demonstrate operation on an oval, cone course, both left and right, small circles, large circles, figure eight
- ❑ Demonstrate driving over obstacles and/or hills, ascending and descending with proper speed
- ❑ Demonstrate stopping the vehicle, then clearing the area around the vehicle, then proceeding
- ❑ Demonstrate blind-spots using a cone test

4.3. Environmental Protection

Knowledge Objectives

- ❑ Identify the need to avoid animals
- ❑ Identify sensitive habitat
- ❑ Identify how to operate in these areas

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5. Emergency Response Driving – Vehicle operators must recognize that emergency response driving demands a high level of concentration and instantaneous reactions.

5.1. Emergency Driving Regulations

Knowledge Objectives

- ❑ Identify the laws, rules, and regulations for operating emergency response vehicles.
- ❑ Identify the responsibilities of the public when encountering an emergency response vehicle engaged in emergency response and how members of the public may fail to adhere to them.
- ❑ Identify agency policies and procedures related to emergency response driving.

5.2. Operating Emergency Response Vehicles

Knowledge Objectives

- ❑ Identify the objectives of emergency response driving
- ❑ Identify risk versus benefit considerations when using a vehicle to respond to an emergency
- ❑ Identify the selection of best routing in the case of emergency responses common to the agency
- ❑ Identify the hazards and liability related to emergency response driving
- ❑ Identify factors that can limit the effectiveness of a vehicle's emergency warning devices
- ❑ Identify the effects of siren syndrome
- ❑ Identify guidelines for entering a controlled intersection when driving under emergency response conditions

Skill Objectives

- ❑ Demonstrate safe driving in a simulated emergency response course

5.3. Beach Emergency Vehicle Response

Knowledge Objectives

- ❑ Identify reasons why driving a vehicle in the beach environment warrants special consideration
- ❑ Identify how the public may be confused by emergency vehicles responding on a beach with no driving lanes or sidewalks indicating the likely path of the emergency vehicle
- ❑ Identify the reasons to modify an emergency vehicle response on the beach to ensure safety
- ❑ Identify considerations in safe beach ingress/egress

Skill Objectives

- ❑ Demonstrate safe driving in a simulated emergency response

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6. Trailer Towing (not required for agencies that do not use trailers)

6.1. Towing a Trailer

Knowledge Objectives

- Identify general aspects of trailer towing
- Identify gross vehicle weight (GVW), gross trailer weight (GTW), and hitch classifications

Skill Objectives

- Demonstrate how to prepare to tow a trailer
- Demonstrate how to properly hitch the vehicles to the trailers used by the agency

6.2. Driving with a Trailer in Tow

Skill Objectives

- Demonstrate proper driving techniques with a trailer in tow
- Demonstrate proper driving techniques when backing a vehicle with a trailer in tow, including a loaded trailer with visual obstructions