



POST-HURRICANE: HOW TO HANDLE ELECTRIC VEHICLE (EV) LITHIUM-ION BATTERIES

Not all EV batteries will incur damage after flooding but it can happen, particularly with saltwater. Users should be aware that smoke or strange noises from the battery could be an indication of battery damage, but a battery also could be damaged without immediately showing those signs.

[NFPA Safety Bulletin on Submerged Hybrid Vehicles/EVs](#)

If an EV lithium battery is suspected to have been damaged by flooding, particularly an EV or hybrid vehicle battery, the owner **should not** attempt to charge or drive the vehicle. Residents should not go near any damaged electric vehicles.

EV vehicles with damaged lithium batteries **should not** be stored indoors or near structures in case the battery does spark a fire or is venting hazardous gases. The vehicle should be towed and checked by the dealer or a mechanic certified for hybrids or EVs before the vehicle is used. The recommended distance between EV vehicles with damaged lithium batteries is 15 meters (50 feet).

If an EV has sustained damage and cannot be towed, request assistance from emergency responders to safely disconnect the battery pack from the vehicle.

Emergency responders should refer to:

- [NFPA Emergency Response Guides for Alternative Fuel Vehicles](#) and
- [Department of Energy \(DOE\) Electric Vehicle Safety Training Resources for Responders](#).

For safe transport of EV lithium-ion batteries, emergency responders or transporters should refer to the U.S. Department of Transportation – Pipeline and Hazardous Materials Safety Administration.

- [U.S. Department of Transportation Safety Advisory Notice – For Consumers to Transporters](#).
- [U.S. Department of Transportation Lithium Battery Guide for Shippers](#).

EV lithium batteries that are used, damaged or defective **must be** managed and transported as hazardous waste, including those that are known to have been exposed to flooding. EV lithium batteries that are suspected to have been exposed to flooding should be treated as hazardous waste. A County may manage the EV batteries at their hazardous waste facility under their EPA generator identification number.

A county may want to consider:

1. A consolidation area for EV vehicle and/or EV lithium battery collection to facilitate the safe removal of the batteries or
2. The establishment of a temporary lithium-ion storage facility for batteries that have been removed by emergency personnel.
 - If a satellite consolidation or storage area is designated, a temporary EPA identification number will be needed.
 - A county may request a temporary ID by emailing an [Emergency Application Form for ID Number](#) to their relevant [DEP district office](#).

The aggregated batteries must be removed by a registered hazardous waste transporter and taken to a permitted transfer, storage and disposal (TSD) facility.

