



THE WOODLANDS FIRE DEPARTMENT

Fire Chief Palmer Buck

AGENCY STATISTICS



170

EMPLOYEES



\$26 MILLION

BUDGET



147

UNIFORMED

The Woodlands Fire Department's mission is to provide superior emergency service and life safety education to the community, utilizing a highly-skilled, professional workforce demonstrating care for our citizens and each other.

TWFD is a full service department with an all hazards approach. They are responsible in making our community safer while averaging a 5 minute response time to all emergencies.

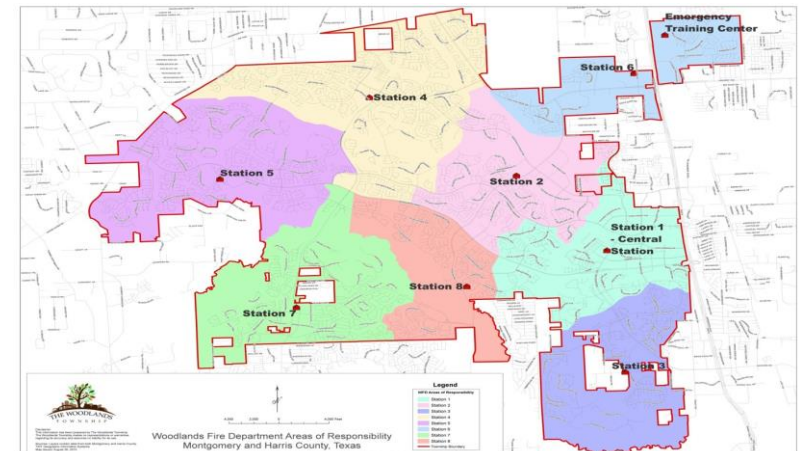
RESPONSE AREA

Operates 9 Facilities

- 8 Fire Stations
- 1 Regional Emergency Training Center

Services Provided

- Fire Suppression
- Advanced life support medical response
- Technical Rescue and Hazardous Materials Response
- Emergency 911 dispatching services for all fire departments in Montgomery County except for the City of Conroe
- Emergency Preparedness and Management Services





5 Engine
Companies
4 Truck Companies
2 Battalion Chiefs





BEST PLACES TO LIVE

The Woodlands Township is the #1 Best City to Live based on crime rate, quality of schools, things to do and cost of living.

#1 BEST CITY
— TO LIVE IN —
AMERICA



Shameless Plug.....

22
Hammock
Dunes April
17, 2021

1st call 2125 – report of “empty lot on fire”

2nd call 2126 – fire in in the woods, heard boom

3rd call 2128 – caller reports car into tree and on fire

2136 E107 on scene, reports “vehicle in woods, fully involved”

2139 BC102 “Fire knocked down – possible Code 4” (DOS)

2149 Medic 24 obtains pronouncement on 2 patients

0436 E107 clears scene



22 Hammock Dunes
Place













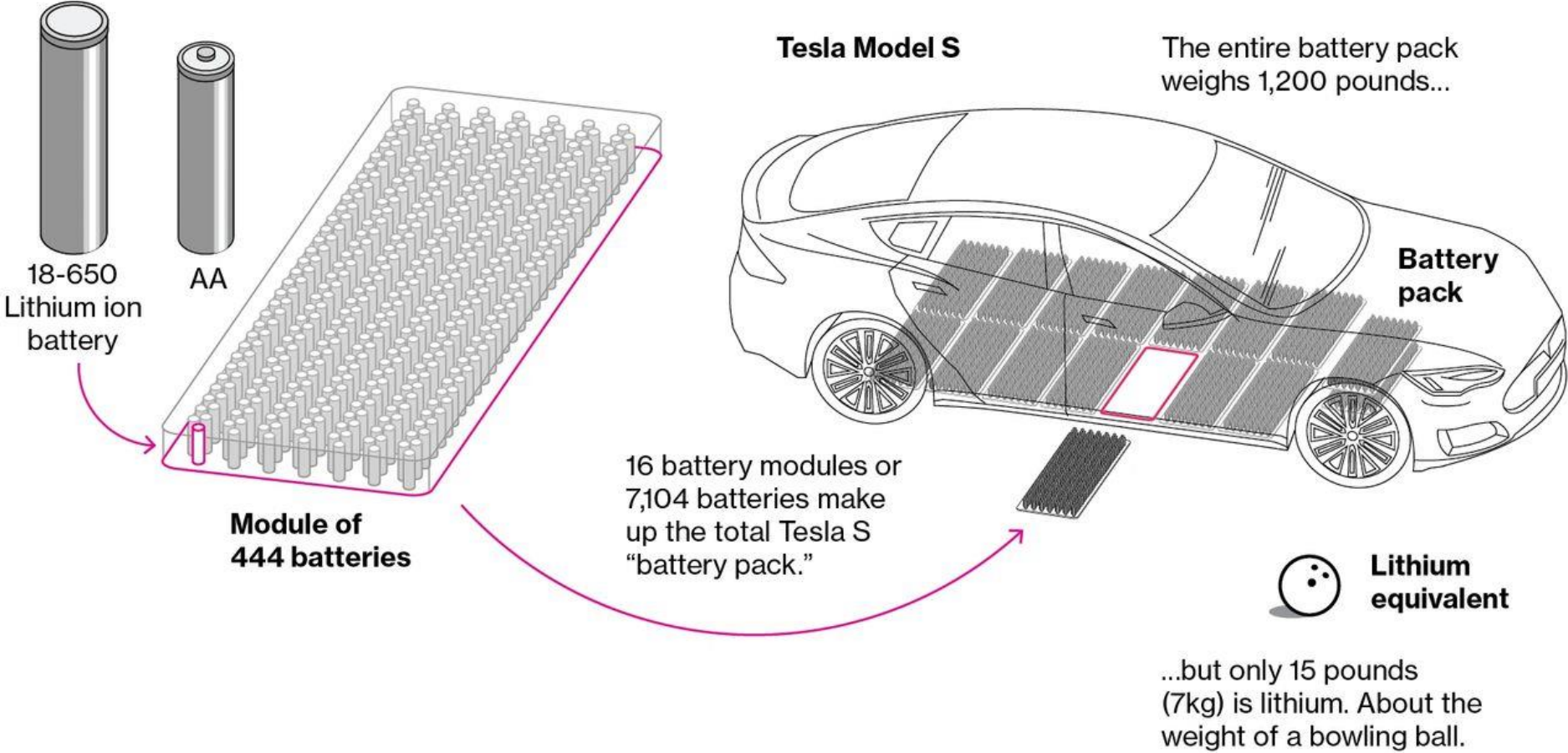
2019 Tesla Model S



Battery Pack consists of 16 modules each with 444 cells for a total of 7,104 lithium-ion battery cells providing up to 400 volts



Tesla Model S Battery Pack













TWFD Actions (all times are approximate)

- 2136 Fire attack with 1 ¾" pre-connect and tank water
- 2139 On fire knockdown found two bodies in vehicle
- 2145 Searched immediate area with Flashlights and TICs
- 2200 Connected to hydrant and flowed unmanned handline to cool battery pack due to continual heat production
- 2215 Discharged 2 large dry chemical extinguishers – no effect



TWFD Actions (all times are approximate)

- 0015 After preliminary accident investigation, vehicle was lifted and cribbed and an unmanned monitor was set up to flow a low-pressure underneath vehicle to continue cooling
- 0300 Assist Medical Examiner with extrication and victim removal
- 0400 Vehicle loaded onto wrecker
- 0436 Incident Closed

Resources used

TWFD 1 Engine, 1 Ladder and 1 BC

MCHD 1 ALS Medic Unit

CCEMS 1 ALS Medic Unit

Estimated 28,000 gallons of water and 2 Dry Chemical Extinguishers

Also on scene: Harris County Fire Marshal's Office, Harris County Haz-mat, Harris County Medical Examiner, Harris County Precinct 4 Constables Office

Tesla Guide for First Responders

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- **USE WATER TO FIGHT A HIGH VOLTAGE BATTERY FIRE.** If the battery catches fire, is exposed to high heat, or is generating heat or gases, use large amounts of water to cool the battery. It can take between approximately 3,000- 8,000 gallons of water, applied directly to the battery, to fully extinguish and cool down a battery fire; always establish or request additional water supply early. If water is not immediately available, use CO2, dry chemicals, or another typical fire-extinguishing agent to fight the fire until water is available.
 - **NOTE:** Tesla does not recommend the use of foam on electric vehicles.

Tesla Guide for First Responders (cont.)

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- Apply water directly to the battery. If safety permits, lift or tilt the vehicle for more direct access to the battery
 - Water may be applied from a safe distance **ONLY** if a natural opening (such as a vent or opening from a collision) already exists. Do not open the battery for the purpose of cooling it.
 - Tesla does not recommend placing the vehicle in a large container full of water



Not Recommended!

Tesla Guide for First Responders (cont.)

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- Battery fires can take up to 24 hours to fully cool.
 - There must be no fire, smoke, audible popping/hissing, or heating present in the high voltage battery for at least 45 minutes before the vehicle can be released to second
 - Always advise second responders that there is a risk of battery re-ignition. Due to potential re-ignition, a Model S that has been involved in a submersion, fire, or a collision that has compromised the high voltage battery should be stored in an open area at least 50 feet from any exposure.

2014 Model S
fire Ft.
Lauderdale
05-2018



**NEW
DETAILS**

TEENS KILLED



2014 Model S fire Ft. Lauderdale 05-2018



2016 Model S fire South Florida
02-2019



2015 Tesla Model S Fire Frisco,
TX 11-2020

Tesla responds

- Tesla has argued its cars are 10 times less likely to catch fire than gasoline vehicles, citing data from the National Fire Protection Association and U.S. Federal Highway Administration on the number of incidents by mileage traveled for its fleet of electric cars vs. other vehicles. Tesla said in 2018 that its vehicles had five fires per billion miles traveled, vs. 55 fires per billion miles traveled in the United States.
- <https://www.washingtonpost.com/technology/2020/12/28/tesla-battery-fire/>

Plug-In Electric Cars

- Just over 1.4 million plug-in electric cars have sold in the United States as of 2019 — with about 60% of those sales in all-electric cars and 40% in plug-in hybrids. Plug-in electric cars accounted for just under 1% of all 146 million new light-duty vehicle sales between 2011 and 2019.
- In 2018 California led nation with 650 all-electric cars per 100K residents. Colorado was 6th with 205 all-electric cars per 100K

Helpful Links

- <https://www.nts.gov/safety/safety-studies/Documents/SR2001.pdf>
- <https://www.carscoops.com/2019/03/firefighters-dropped-a-burning-bmw-i8-into-a-water-container/>
- <https://www.washingtonpost.com/business/2019/10/23/man-died-burning-tesla-because-its-futuristic-doors-wouldnt-open-lawsuit-alleges/>
- <https://www.seattletimes.com/business/a-tesla-model-s-erupted-like-a-flamethrower-it-renewed-old-safety-concerns-about-the-trailblazing-sedans/>
- <https://abcnews.go.com/Technology/tesla-opens-investigation-car-burst-flames-times/story?id=59930420>
- <https://www.dallasnews.com/business/autos/2020/12/28/a-tesla-model-s-erupts-in-flames-in-frisco-sparking-new-concerns-about-safety-of-older-electric-batteries/>
- <https://mccunewright.com/practice-areas/class-actions/tesla-model-s-and-model-x-lithium-ion-battery-fires/>
- <https://usafacts.org/articles/how-many-electric-cars-in-united-states/>
- <https://www.tesla.com/firstresponders>