

Fire away!



California is battling one of the largest fires in its history. In total, about 1.3 million ha have been burned. The California Department of Forestry and Fire Protection (Cal Fire) owns more than 50 planes and helicopters, making this the largest department-owned fleet of aerial firefighting equipment in the world. **The Straits Times** takes a look at how California deploys dozens of aircraft to battle the wildfires.



A Cal Fire airplane (above, left) dropping fire retardant on Sunday along a burning hill in Napa County's Calistoga in California.



1.3m ha

of burnt areas are equivalent to the size of **18 Singapore islands**



Cal Fire does not own any Supertanker aircraft but has employed contractors to bring them in to help suppress major fires.

FIREFIGHTING AIRCRAFT

Here's a look at some of the firefighting aircraft that are battling the California fires.



Boeing 747 Supertanker
• Length: 70.7m

McDonnell Douglas DC-10
• 52m

C-130 Hercules
• 30m

McDonnell Douglas MD-87
• 39.8m

British Aerospace 146
• 26.2m

Erickson Skycrane
• 27m

CH-53E
• 30m

Bombardier CL-415 Super Scooper
• 19.8m

S-2T airtanker
• 13.3m

MH-60s
• 15.2m

UH-1Y
• 18m

Bell 412
• 17.1m

Bell 212
• 17m

UH-1H Super Huey
• 16.2m

CH-46 Echo
• 14m

GLOBAL SUPERTANKER

The world's largest firefighting aircraft, it carries 10 tanks for water or fire retardant, which is discharged using pressurised air.

Drop system and capacity

- Pressurised constant flow system
- Refill time: 30min
- What is dropped: retardant, foam, gel or water
- Tanks: 8 high pressure, 2 low pressure

Weight

- Take-off weight: 297,100kg (full retardant and 2½ hours' fuel)
- Maximum take-off weight: 394,625kg

Dimensions

- Wingspan: 54.2m
- Length: 70.7m
- Tail height: 19m

Operations

- Drop height: 60m-90m
- Drop length: 1.1km-4.8km
- Drop speed: 278kmh

Crew

- Two pilots, and one drop system operator

Discharge pipes

Fire retardant released to slow the spread of fire

Up to 90m

UP TO 4.8KM

Artist's impression

COMPARISON



To match the Supertanker's capability, a large tanker plane would have to fly seven missions, carrying 11,300 litres each time.

Water bombing (right)

The bucket can be filled manually on the ground, or by dipping it into lakes and reservoirs. The aircraft hovers over the target and drops water to wet the area.

Scoping water (below)

Water is scooped into external or internal tanks through retractable or fixed probes. The typical filling time is about 10 seconds.



Bombardier CL-415 Super Scooper

BY THE NUMBERS

Number of wildfires

8,136

Structures damaged or destroyed

7,837

Fatalities

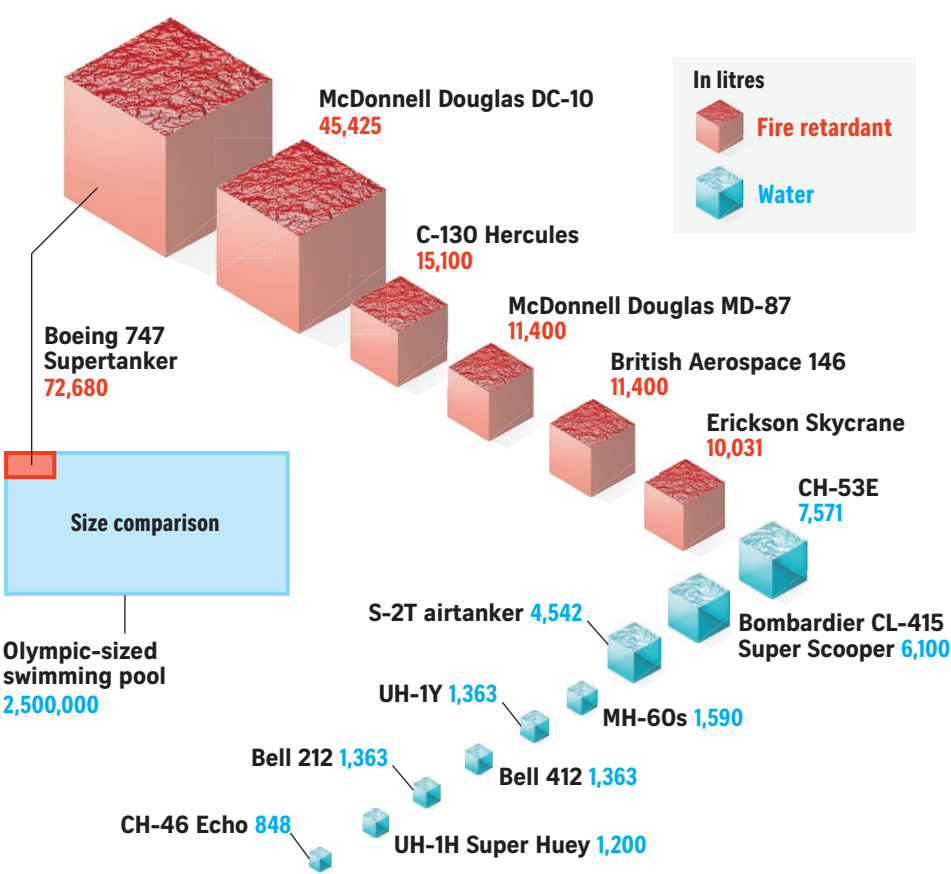
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Insured losses

US\$5b

AIRCRAFT CAPACITY

A comparison of how much fire retardant and water the aircraft can each hold.



A world on fire

The wildfires on the west coast of the United States have dominated headlines worldwide. But what do the Singaporeans have to do with nations far away, such as Singapore? In this episode, ST's environment correspondent Audrey Tan

and climate change editor David Fogarty speak with climate scientist Peter Kalmus on the climate change link. Dr Kalmus is from the US National Aeronautics and Space Administration's Jet Propulsion Laboratory, and is speaking to The Straits Times in his individual capacity.

Find out more by scanning this episode using our QR code. <https://str.sg/JWaf>

