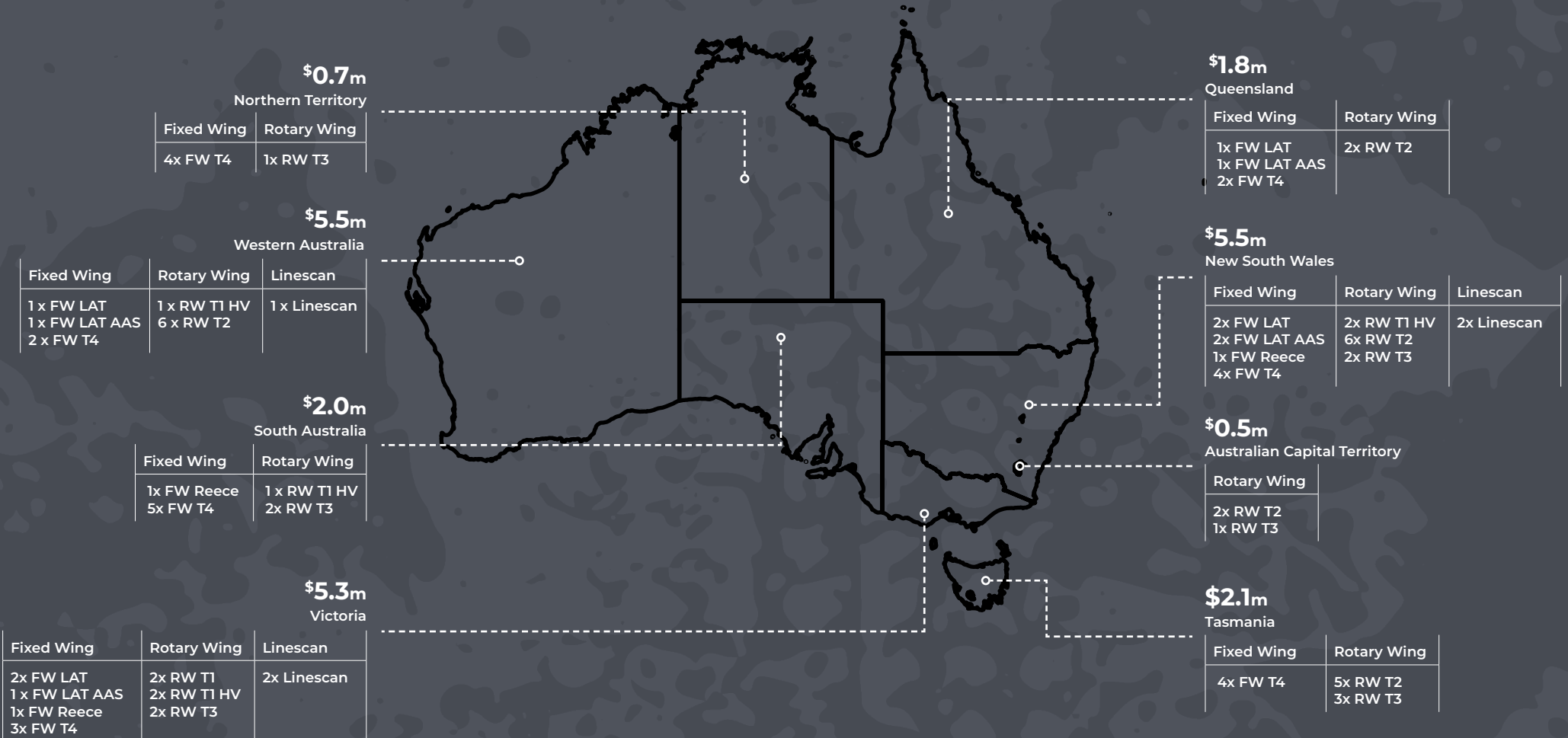


# Australian Government contribution to aircraft standing charges 2020-21



The aircraft services shown above are included in the 161-total NAFC fleet for 2020-21, with the balance being funded by the States and Territories

# Fleet details and capabilities



→ **Type 1 Rotary Wing High Volume (Heavy, capable of meeting the specified high-volume delivery performance scenario of 100,000 litres in 90 min).**

These include aircraft such as the Erickson Aircrane and Sikorsky S61N. These aircraft are ideally suited to local operations as their transit times are relatively slow, their fuel consumption is high although they maintain a large volume tank up to 9,000lt.

→ **Type 1 Rotary Wing (Heavy, 2,650 litres or greater).**

These include aircraft such as Blackhawk and Chinook. Some of these aircraft have improved transit characteristics (higher cruise speed and lower fuel consumption than the Type 1 High Volume).

→ **Type 2 Rotary Wing (Medium, 1,135 – 2,649 litres).**

These include aircraft such as the Bell 212/412, AS365s and BKs. They may undertake a firebombing role with intermediate capacity, with some tasked to roles such as crew insertion particularly by winch/rappel.

→ **Type 3 Rotary Wing (Light, 380 – 1,134 litres).**

These include aircraft such as the Eurocopter Squirrel and will often be the first line of aerial attack for new fire starts in their local area. They may undertake other roles such as crew transport and aerial supervision/reconnaissance, including some fitted advanced intelligence gathering equipment.

→ **Type 4 Fixed Wing (SEAT, Single Engine Air Tankers, 2,270 litres or greater).**

These include aircraft such as the Air Tractor AT802F including its 'Fireboss' scooping variant.

→ **LAT/VLAT Fixed Wing (Large and Very Large Air Tanker, 6,813 – 35,582 litres).**

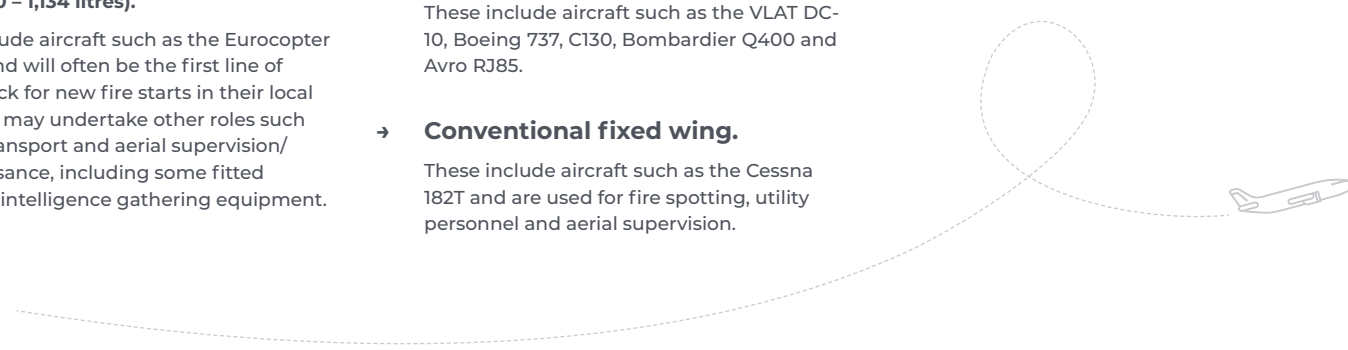
These include aircraft such as the VLAT DC-10, Boeing 737, C130, Bombardier Q400 and Avro RJ85.

→ **Conventional fixed wing.**

These include aircraft such as the Cessna 182T and are used for fire spotting, utility personnel and aerial supervision.

→ **Technology aided conventional fixed wing and rotary wing.**

These include aircraft such as the Learjet 35A and Squirrels fitted with advanced intelligence gathering equipment, used for roles such as remote heat sensing and mapping, surveillance and Reconnaissance (ISR).



## Aircraft involved in active suppression deliver:

→ **Water**

Drawn from dams or loaded on the ground is an immediate suppressant suitable for active fire. Delivered from the air, water alone is the least effective, unless large volumes can be delivered quickly, as the volume of the drop is reduced through evaporation.

→ **Water mixed with Class A foam**

Where a surfactant foaming agent is used to 'expand' the volume of the drop and wetting agents to assist in moisture remaining on the surface of vegetation longer than it otherwise would. This is also an immediate suppressant designed for active fire.

→ **Gel**

Water with an added agent to improve drop characteristics and coating of ground fuel.

→ **Incendiary devices**

These devices are generally used during prescribed burning operations to initiate planned fire in less accessible areas, or during 'going' bushfires to ignite backburns.

→ **Fire retardant**

Consisting of a slurry of fertilisers (ammonium and diammonium sulphate and ammonium phosphate) mixed with thickeners (guar gum) and corrosion inhibitors (for aircraft safety). Fire retardant slows the spread of fire and may reduce its intensity. This is accomplished by chemical reactions that reduce the flammability of fuels or delay their combustion. This is effective when the retardant is dry and is not reliant on a 'wet drop'. Effectiveness of the retardant line dissipates over time. Currently the only fire retardant approved for aircraft use in Australia is that certified by the US Department of Agriculture. This requires large quantities to be imported from North America and stored locally to support effective fire response.