

Oregon's multi-mission aircraft

A critical resource for Oregon's forests



Overview

The Oregon Department of Forestry is seeking to replace a state-owned fixed-wing aircraft that has been serving the agency and Oregonians for over 36 years.

Aircraft mission profile

In 1986, ODF purchased the Partenavia P-68 (light fixed wing aircraft) to conduct forest health surveys and through time has expanded the aircrafts use to support the Protection from Fire Program. In recent years, the Emergency Fire Cost Committee approved a strategic investment for the purchase of an onboard infrared camera and augmented reality mapping system for wildfire detection and intelligence gathering, making the Partenavia a critical resource during fire season.

In 2022, the Partenavia flew approximately 100 hours of nighttime detection which resulted in the early identification of 56 new wildfires in Oregon. Of the 56 fires detected, 87% were under extreme fire conditions, with high potential to grow into large costly wildfires. 52 of the 56 fires detected on ODF protected land were suppressed at 10 acres or less. The remaining four fires detected were outside of ODF's protection, including the Double Creek fire which was detected by the Partenavia and crew on August 25th at one acre in size. The Double Creek fire eventually grew to 171,500 acres and cost \$32.8M to suppress.

The Partenavia has been in service for 36 years and is beginning to show its age in the form of unexpected down time and repairs. The increase in unscheduled maintenance and repairs paired with the limited performance of

the aircraft is negatively impacting the agency's ability to find and keep fires small in Oregon. The agency will soon be faced with the difficult reality of retiring the Partenavia from its four decades of service to Partenavia. Losing the agency aircraft would have a deep and lasting impact on the Fire Protection Division and the Oregonians it serves. To prepare for the Partenavia's retirement from service, the agency is seeking funding for a new multi-mission aircraft (MMA) to support the critical work of the department.

In evaluating replacement options, the agency considered aircraft capable of performing a wide variety of day or night missions including the following:

Agency mission capability

- Lightning detection using infrared sensor and night vision goggles (daytime and nighttime)
- Air attack/lead plane
- Large fire support (firefighter safety and perimeter mapping)
- Logistical fire support (rapid delivery of firefighting supplies)
- Firefighter transport
- Forest health survey
- U.S. Forest Service approved (can support federal cooperators)

Other agency mission capabilities

- Search and rescue
- Law enforcement – Oregon State Police Agreement
- Disaster relief



Aircraft requirements and estimated Costs

The agency has considered several aircraft that would meet agency needs and provide additional mission capabilities statewide. The basic aircraft requirements to conduct multi-mission work include:

Aircraft requirements

- Twin engine turbine
- High wing aircraft
- Infrared and night vision goggle equipped or compatible platform with supplemental type
- Certificate at purchase
- STOL (Short Takeoff/Landing) aircraft performance
- Minimum 10-passenger capacity
- Cargo rail floor system for pallets
- 8,000' single engine service ceiling

- Cargo rear door with ability to open in flight
- Type certificated aircraft

Estimated Cost

A new aircraft that meets the above requirements with a night vision system and infrared camera for fire detection is estimated between \$10M to \$12M. The new aircraft will have an operational lifespan of 25 to 30 years, making it a great long-term investment for the State of Oregon. This is a critical resource for the department, and we look forward to discussing the continued success of the ODF multi-mission aircraft program in more detail.

Contact

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