



Modernization of ODF's aerial firefighting resources

A critical resource for Oregon's forests

Overview

The Oregon Department of Forestry has researched the costs associated with updating the current roster of contracted aviation assets for firefighting. These updates would provide enhanced capacities, speed, and missions.

Aircraft mission profile

ODF's current fleet of firefighting aircraft includes various types of contracted helicopters and fixed wing aircraft to support the tactical and reconnaissance missions associated with wildland firefighting. ODF contracts six Type 2 (medium duty) and two Type 3 (light duty/helitack) helicopters, along with two detection aircraft, one large airtanker, five single engine airtankers, and two fire bosses (amphibious single engine airtankers). Additionally, ODF owns and operates the P-68 Observer equipped with FLIR Infrared camera and augmented reality mapping systems onboard for nighttime detection and fire support missions.

One of the pitfalls of the current fleet of contracted aircraft is the age of the fleet. Many of the Type 2 helicopters are surplus military helicopters such as the UH-1H. In addition to the age of the fleet, the USDA Forest Service (USFS) has issued new specifications for carding which has prevented some operators from being able to get Interagency Aircraft Cards for their aircraft, reducing the number of available Type 2 helicopters. Without the Interagency Aircraft Cards, aircraft under contract to ODF may not be able to fly on federal fires or over federal lands. As part of

the complete and coordinated system of firefighting in Oregon, ODF seeks to contract with aircraft which have been inspected and carded through the USDA Forest Service or Department of Interior Office of Aircraft Services (DOI).

Type 1 (heavy duty) helicopters would provide greater capacity for hauling, as well as gallons delivered per load. While capacity is greatly increased, so is the cost to operate these helicopters.

- Type 1 helicopters depending on make and model will range from \$750,000 to \$1.5M annually. Chinook helicopters are at the top end for cost.
- In comparison, the current fleet of Type 2 helicopters runs between \$475,000 to \$550,000.

Nighttime aerial firefighting program – SWO Area

Another benefit to the Type 1 helicopters is the additional mission profiles available. A modern Type 1 fleet can provide nighttime firefighting capacity. There is additional personnel and infrastructure needed for this mission, such as dip tanks and/or heli-wells. This equipment provides a measure of safety by having pilots become familiar with and return to the exact same location after each drop.

- Type 1 helicopter day and night estimated \$1.5M to 1.7M annual contract
- 75 days, increase flight time from 8 to 14 hours



- \$500,000 to \$700,000 infrastructure investment to strategically place dip tanks - mirror the Cal Fire model
- 4 personnel: 2 helicopter managers, 1 helicopter crew member, 1 nighttime aircraft dispatcher

Ideally, to adequately support the nighttime firefighting mission, ODF would add one additional aircraft to the state-owned fleet to support aerial firefighting at night and phase out the P-68 observer.

The upgraded and additional aircraft would add more capacity in nighttime detection, while also allowing for adequate night aerial supervision. These aircraft would be more capable and better suited to the nighttime detection and aerial supervision missions proposed.

Aircraft would be agency owned to keep in step with emerging technologies and allow greater ability to adapt to changes over a 25- to 30-year lifespan of the aircraft.

- Aircraft will not be limited to wildfire and would support a multitude of missions in support of all natural disasters.
- \$10M to \$12M per aircraft equipped with infrared and mapping to support night time aerial firefighting program, day and night time detection across the state.

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