Tahoe Regional Fire Helicopter Business Plan

Prepared for Prospective Donors

By

Lake Tahoe Regional Fire Chiefs Association

Executive Summary

The Lake Tahoe Regional Chiefs Association and its partner agencies present this comprehensive plan to establish a dedicated Type 1 helicopter program permanently stationed in Zephyr Cove in the Lake Tahoe Basin. This initiative directly addresses escalating wildfire threats, supports regional emergency response, and protects one of the nation's most treasured natural environments. The plan outlines the urgent need for action, details the three-phase implementation strategy, and highlights the broad regional support from local and regional political leaders, the Lake Tahoe Regional Fire Chiefs Association, and private donors.

Lake Tahoe's pristine environment and its economic vitality, driven by tourism and high-value residential communities, are increasingly vulnerable to catastrophic wildfires. The 2021 Tamarack and Caldor wildfires underscored this risk, causing $400 million in tourism losses despite the fires not directly damaging the Tahoe Basin. Rapid population growth and high property values further amplify the need for a robust, permanent aerial firefighting and emergency services capability.

This business plan is designed for public donors and community stakeholders who recognize the importance of safeguarding the region. It presents the vision, key benefits, financial projections, and phased timeline necessary to bring this program to full operational capability. While this plan details projected costs, it does not request a specific dollar amount, allowing donors the flexibility to contribute according to their capacity and interest.

Background & Problem Statement

Residents of the Lake Tahoe Basin experienced a wake-up call during the 2021 Tamarack and Caldor wildfires. Although the Sierra Nevada Mountain Divide provides some protection, the Caldor Incident proved that natural barriers cannot guarantee safety for a region surrounded by more than one million acres of wildfire fuel. Even without direct devastation to communities in the Lake Tahoe Basin, the fires resulted in the region suffering an estimated $400 million loss in tourism revenue.

Population growth continues to increase the region's vulnerability. The U.S. Census Bureau reported a 2.9% population increase in Douglas and Washoe counties in 2020 alone, and a 15% increase since 2010. Protecting Lake Tahoe's communities, natural environment, and economic vitality requires a level of fire protection that matches the region's unique risks and significance.

Without a dedicated aerial firefighting and rescue resource, the likelihood of catastrophic loss grows each hour a wildfire rages unchecked. Lives, property, critical infrastructure, and wildlife are at risk, and survivors of such events are forever changed.

Program Proposal

The Lake Tahoe Regional Fire Chiefs Association, together with its partner agencies, proposes to establish a local aerial firefighting and rescue helicopter program permanently stationed in the Lake Tahoe Basin. This Type 1 helicopter resource will be airborne within six minutes, day or night, 365 days a year, to protect the greater Lake Tahoe Region in both Nevada and California.

Type 1 helicopters are proven to deliver 350% more fire suppressant gallonage than a single HC-130 in eight hours, according to the National Wildfire Coordinating Group (NWCG). Beyond wildfire suppression, the helicopter is able to provide vital services such as search and rescue, vegetation management, avalanche control, and advanced life support medical transport.

This plan adopts a metered acquisition approach, ensuring that the program scales effectively while securing the necessary partnerships, funding, and infrastructure.

Education and Workforce Development

The Tahoe Helicopter Fire Rescue Program is more than an emergency response resource—it is a community investment in education, workforce training, and regional resilience. Located at George Whittell High School, the helicopter base serves a dual purpose as both an operational hub and a hands-on learning environment for students pursuing fire science, emergency medical, and aviation careers. Through partnerships with the Tahoe Douglas Fire Protection District, Douglas County School District, and regional fire and EMS training entities, students will gain direct access to nationally recognized certifications and applied technical training opportunities, including:

- Firefighter I and Firefighter II Certification Programs: Offering foundational and advanced coursework aligned with National Fire Protection Association (NFPA) standards. Students will learn essential skills in fire behavior, suppression, and emergency response, preparing them for careers in public safety.
- Emergency Medical Technician (EMT) Certification: Students will be able to complete the coursework and practical training necessary to earn EMT certification, developing vital medical assessment, trauma management, and life-saving skills that are essential for both firefighting and broader emergency service careers.
- Mechanical and Aviation Maintenance Training: Students will gain exposure to the mechanical systems of the Type 1 helicopter and supporting ground equipment, guided by professional mechanics and engineers. This hands-on technical experience supports pathways into aircraft maintenance, mechanical trades, and engineering fields.
- Flight Simulation and Aviation Science: A flight simulator will allow students to experience the fundamentals of flight operations, navigation, and situational awareness in a controlled environment. This training introduces them to the principles of aviation safety and may inspire future pilots, mechanics, and public service professionals.

This integrated educational partnership creates a model for experiential learning—bridging classroom instruction with real-world emergency operations. Students graduate with certifications, technical skills, and a sense of civic purpose, helping to sustain the next generation of emergency service professionals for the Lake Tahoe region and beyond.

Key Benefits

- Aggressive initial fire attack to suppress 95% of all fires to 10 acres or less.
- Immediate response for emergency air rescues.
- 1,000-gallon fire suppressant capacity with hover fill capability.
- Helicopter-in-flight refueling reducing turnaround time.
- Immediate Helitack ground firefighter delivery.
- Onboard Advanced Life Support paramedic services and patient delivery to high-level trauma centers.
- Hoist-capable terrestrial and maritime air rescue.
- Night fire reconnaissance and suppression.
- Night rescue operations.
- Aerial Vegetation Management and wildfire fuel reduction support.
- Avalanche search and rescue.
- Avalanche control.
- High-rise & high-angle rescue.
- Law enforcement support.

Partnerships and Support

The helicopter program has received strong backing from political leaders, regional fire chiefs, federal and state agencies, and private donors. This broad coalition demonstrates the region's commitment to implementing and sustaining the program.

Political Support includes U.S. Senators Rosen and Cortez-Masto; U.S. Congressmen McClintock, LaMalfa, and Amodei; Nevada Assemblymen Wheeler; and local commissioners and city managers.

Regional and Local Fire Chiefs and Sheriff's Departments supporting this initiative include North Lake Tahoe Fire, Sparks Fire, Truckee Fire, Tahoe Douglas Fire, North Star Fire, Reno Fire, Olympic Valley Fire, and many others across Nevada and California.

Federal and State agencies supporting the program include the U.S. Forest Service, Bureau of Indian Affairs, Bureau of Land Management, Nevada Division of Forestry, and CAL FIRE.

Private donors and local organizations, including major resorts, community foundations, and individual philanthropists, have expressed support and continue to contribute funds.

Cost Estimates & Funding Requirements

The program will be implemented in three phases, with total projected costs of approximately $28.3 million. These estimates provide donors with a clear understanding of the scale of investment required without assigning specific fundraising targets.

Phase	Description	Timeline	Estimated Cost
Phase 1	Acquisition & Production	Year 1	$10M
Phase 2	Infrastructure & Interim Operational Capability	Year 2	$10M
Phase 3	Full Operational Capability	Year 3	$8.3M

Implementation Timeline

Key milestones from 2021 through 2026 illustrate the deliberate and phased approach to building the program. These include research, approvals, fundraising, land acquisition, helicopter procurement, and full 24-hour operational capability.

- Summer 2021: Research program purpose, needs, costs, and potential challenges.
- Fall 2021: Secure TDFPD Board of Trustees approval and establish public donation mechanisms.
- Winter 2022: Obtain state approvals for budget fund, begin marketing campaigns, and secure temporary Helibase site.
- Spring/Summer 2022-2023: Ongoing public presentations, fundraising, and political engagement.
- Fall 2024: Authorization from Douglas County School Board for permanent Helibase site in Zephyr Cove.
- Summer 2025: Instituted Oversight Steering Committee. Finalize permanent Helibase plans and begin helicopter acquisition.
- Spring/Summer 2026: Take delivery of Type 1 helicopter, initiate training and daytime operations, and achieve full night-flight certification for 24-hour operations.

Sustainability & Long-Term Operations

Long-term sustainability will rely on a diversified funding model including individual charitable donations, federal and local grants, annual contributions from 22 local fire agencies, and partnerships with regional utilities and private donors. Maintenance contracts, recurrent training, and regular equipment upgrades will ensure the helicopter program remains a reliable first responder resource well into the future.

Leadership & Governance

Scott Lindgren serves as Fire Chief of the Tahoe Douglas Fire Protection District and holds leadership positions in several regional fire organizations. His experience and regional network position him to oversee the successful implementation and operation of the helicopter program.

Contact Information:
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Chairman, Lake Tahoe Regional Fire Chiefs Association
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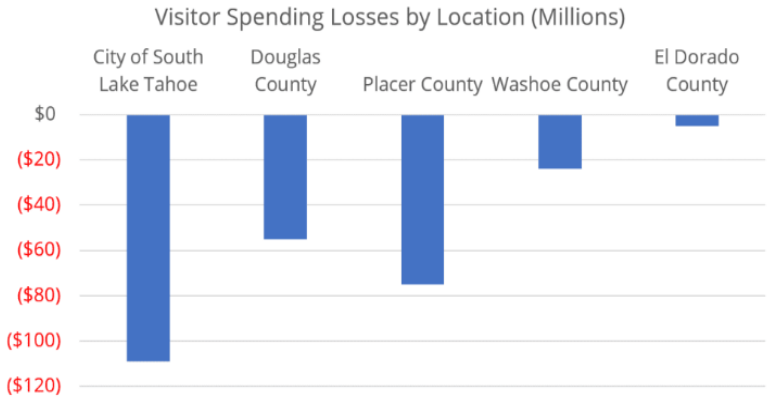
Appendices

- Appendix A – Visitor Spending Loss Chart
- Appendix B – Wildfire Risk Maps and Charts
- Appendix C – Technical Specifications of Type 1 Helicopter
- Appendix D – Letters of Support
- Appendix E – Detailed Timeline Tables

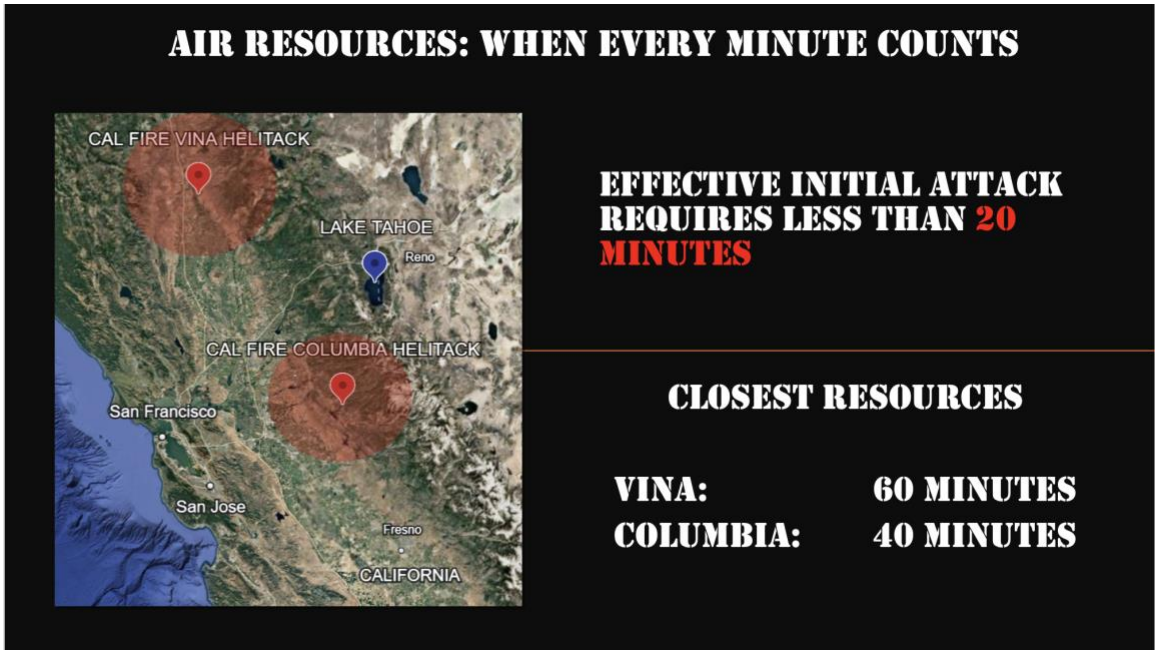
Appendix A: Visitor Spending Loss Chart

Visitor Spending Losses by Location (Million USD)



Source: Lake Tahoe Tourism Impact Model.

Appendix B – Wildfire Risk Maps and Charts



Appendix C – Technical Specifications of Type 1 Helicopter

This appendix outlines the general technical specifications for a Type 1 helicopter, as defined by the National Interagency Fire Center (NIFC) and National Wildfire Coordinating Group (NWCG). Specifications may vary slightly by manufacturer, but the following standards represent the common operational and performance parameters for heavy-lift, multi-mission aircraft used in aerial firefighting and emergency response.

General Classification

• Designation: Type 1 (Heavy-lift, multi-mission)
• Primary Mission: Aerial firefighting, rescue, transport, and multi-agency emergency operations
• Crew Configuration: 2 pilots (pilot + co-pilot) + optional flight engineer/crew chief + helitack or rescue crew (up to 12 personnel depending on mission)

Performance

Specification	Typical Range
Maximum Gross Weight	16,000 – 50,000 lbs (7,250 – 22,700 kg)
Useful Payload	5,000 – 25,000 lbs (2,270 – 11,340 kg)
Cruise Speed	120 – 160 knots (138 – 184 mph / 222 – 296 km/h)
Operational Range	250 – 350 nautical miles (460 – 650 km)
Endurance	2 – 4 hours per fuel cycle (extendable with auxiliary tanks)
Service Ceiling	10,000 – 14,000 feet MSL
Hover Ceiling (IGE/OGE)	7,000 – 10,000 feet MSL typical

Firefighting Capability

Feature	Description
Water/Retardant Capacity	Minimum 700 gallons; typically 850 – 3,000 gallons depending on model
Bucket/Fixed Tank Systems	Bambi Bucket or belly-mounted tank with hover-fill capability

Hover-Fill Rate	350 – 700 gallons per minute (GPM)
Drop Accuracy	GPS-aided precision drop control system
Foam/Retardant Injection System	Compatible with Class A foam and gel retardants

Rescue and Support Capabilities

• Rescue Hoist: 600 – 1,000 lb capacity, variable-speed winch
• External Load: Capable of long-line external cargo up to 10,000 – 20,000 lbs (varies by model)
• Passenger Transport: Up to 15 crew or evacuees depending on configuration
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Medical Configuration: Supports Advanced Life Support (ALS) with stretcher and onboard medical equipment

Avionics and Safety Systems

• IFR/VFR dual-capable cockpit with glass avionics suite
• Night Vision Goggle (NVG) compatible lighting and systems
• FLIR/thermal imaging for night fire reconnaissance and rescue
• Dual hydraulic and redundant electrical systems
• Enhanced Ground Proximity Warning System (EGPWS)
• Satellite tracking and real-time telemetry for operations center visibility

Maintenance and Operational Requirements

• Crew: 2 pilots + 1 flight engineer + ground support team (mechanics, fuel tender operators)
• Turnaround Time (Refill/Refuel): 5 – 10 minutes typical
• Annual Flight Hours: 400 – 800 operational hours typical for regional programs
• Maintenance Cycles: 25, 50, 100, and 300 hour intervals per FAA Part 135/133 standards

Multi-Mission Applications

- Wildfire suppression (initial attack and extended operations)
- Search and rescue (terrestrial and maritime)
- Medical evacuation (medevac)
- Law enforcement support and surveillance
- Vegetation management and controlled burn operations
- Avalanche control, lift evacuation, and infrastructure support

Appendix D – Letters of Support

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Appendix E – Detailed Timeline Tables

Timeline:

Summer 2021		
	Research program purpose, needs, costs, and potential challenges	Complete
Fall 2021		
	Discuss program concept and obtain support with TDFPD Governing Board, Cooperation Agencies, Politicians, and Regulatory Agencies prior to going public.	Complete
	Obtain approval from TDFPD Board of Trustees to pursue program	Complete
	Establish program on TDFPD website and establish point and pay option to accept donations.	Complete
Winter 2022		
	Obtain Resolution from TDFPD Board in Public Meeting approving program and establishing a fund in budget to track program revenue and expenditures.	Complete
	Start initial marketing campaign.	Complete
	Submit and receive approval form State of Nevada Department of Taxation to establish budget fund in TDFPD annual budget.	Complete
	Presentation from Parasol Community Foundation (now Tahoe Community Foundation) at TDFPD Board meeting.	Complete
	Land acquisition and permitting for temporary location. Douglas County has agreed to the use of the property near Logging Road. TRPA has agreed to issue a temporary use permit for a Heliport Helibase at this location until a permanent location within the basin is secured.	Complete
	Explore the feasibility of permanent Base at High School in Zephyr Cove.	Complete
	Enter into partnership and establish a fund with Parasol Community Foundation (now Tahoe Community Foundation) at March 2022 Board Meeting.	Complete
	Create and implement professional marketing plan with KR2 Marketing who has volunteered their time.	In-progress

Spring/Summer 2022/2023		
	Ongoing public presentations and fundraising programs to promote program.	In-progress
	Ongoing meetings with politicians to gather support and seek out grant funding.	In-progress
Fall 2024		
	Obtain approval for Fire Science Program at High School in Zephyr Cove.	Complete
	Obtain authorization from Douglas County School Board to co-habitat Helibase at High School in Zephyr Cove.	Complete
	Ongoing public presentations and fundraising programs to promote program.	
	Ongoing meetings with politicians to gather support and seek out grant funding.	
Summer 2025		
	Finalize plans for permanent Helibase and begin planning and permitting process.	
	Begin formal helicopter acquisition process for purchase of Type 1 helicopter.	
	Start construction of permanent Helibase for projected completion in Summer 2026.	
	Ongoing public presentations and fundraising programs to promote program.	
	Ongoing meetings with politicians to gather support and seek out grant funding.	
Winter 2026		
Spring/Summer 2026		
	Take delivery of helicopter and start training and begin emergency response.	
	Start daytime operations with full flight crew.	
	Begin training and certification process for full night flying capable operations.	
	Complete night flying certification process and begin 24-hour operations.	
	Continue funding and support of program into the future.	