

Update on Helo Support to Toolik Field Station

Presentation for Toolik Steering Committee Meeting in January 2025



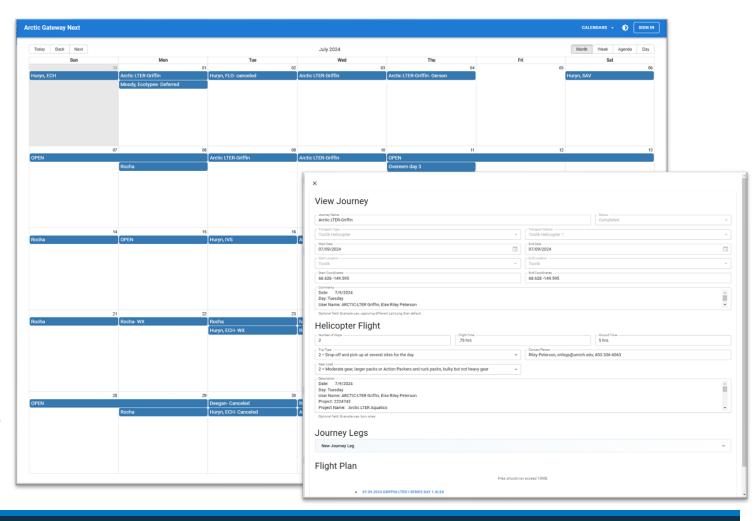
Toolik Field Station Helo Support Overview

- Battelle Arctic Research Operations (ARO) provides helicopter support to TFS including a helicopter coordinator and multiple helicopters/pilots during the field season through the Arctic Research Support & Logistics Services contract from NSF
- Serious issues with helicopter support at Toolik occurred during the 2021 & 2022 field seasons
- The Battelle ARO Team has worked collaboratively with the NSF and UAF to implement continual improvements to provide exceptional helicopter support at TFS including:
 - Expanded criteria in helicopter support vendor selection (implemented in 2023 and moving forward)
 - Refocused recruiting and training of helicopter coordinators (implemented in 2023 and moving forward)
 - Improved Toolik Helo Calendar capability (implemented in 2024 and moving forward)
 - Near real-time satisfaction survey with notifications to Battelle ARO Program Management and the NSF (implemented in 2023 and moving forward)
 - Recurring third-party aviation safety evaluation of TFS helicopter operations (implemented in 2024 and planned recurrence at regular intervals moving forward)



Improved Toolik Helo Calendar Capability

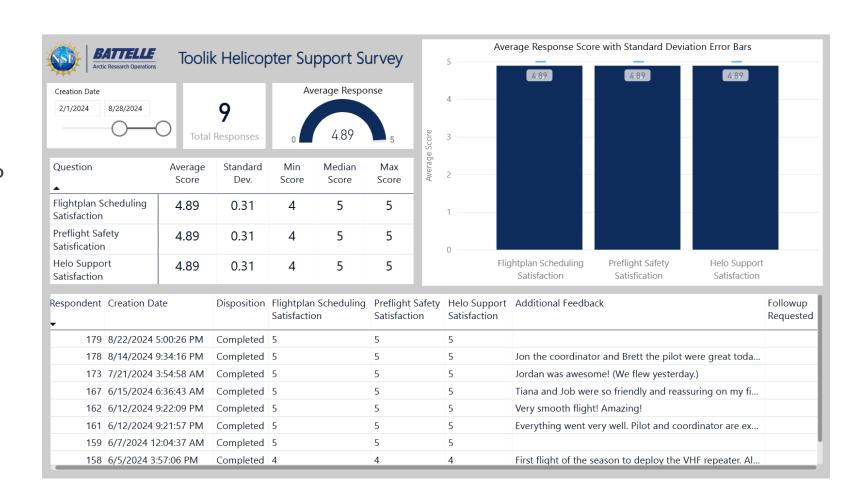
- Improved Toolik Helo
 Calendar Capability better
 captures planned missions
 and provides visibility of the
 calendar out to stakeholders
- Capability was developed in 2023, then used for the 2024 field season
- Toolik Helo Calendar available at:





Summary of Feedback Received for 2024

- 9 responses received throughout 2024
 - Average Satisfaction Score was 97.8% (4.89 of 5)
 - 8 of 9 responses were 100% (5 out of 5)
 - Lowest satisfaction score received was 80% (4 of 5)
 - Multiple responses praised the pilots and helo coordinators
- No requests for follow-up received out of 9 responses





3rd Party Aviation Safety Evaluation

- In July 2024, Battelle ARO worked with a 3rd party aviation safety subject matter expert (SME) from the Business Aviation Safety Consortium (BASC) to evaluate aviation safety of helicopter operations at Toolik Field Station
- BASC conducted an ICAO Annex 6 part II, FAA Title 14, Part 135, Commuter and On Demand Operations, Part 5, Safety Management System (SMS) Regulatory and Operational Compliance verification per aviation industry auditing norms
 - International Civil Aviation Organization (ICAO) is a United Nations agency which helps 193 countries to cooperate and share their skies to their mutual benefit through areas including global aviation safety planning, oversight, and risk mitigation.





Aviation Safety Evaluation Activities

- Onsite verification of safe operations included observations of pre-flight inspections, passenger briefings, fueling, fuel testing, weather checks, callin times, hazardous materials, weigh-in passengers and gear, and more
- Interviews with the Battelle ARO Team including Patrick Proden (Alaska Ops Manager), Jon Hall (Helo Coordinator), and Bevin Luna (HSE Manager)
- Interviews with researchers
- Virtual interviews with the Alpine Air Management Team





3rd Party Aviation Safety Evaluation Summary

• Findings included opportunities for improvement, but were very positive

"Alpine Air is a highly competent and professional organization. Its leadership team is actively engaged and has fostered a positive safety culture, extending to remote operations. The Safety Management System (SMS), managed by an experienced Director of Safety, includes robust programs and training to enhance participation and safety awareness. This commitment to safety is evident among the pilots, who were observed to be confident, competent and safety-minded."

- BASC, 2024 TFS Aviation Ops External Evaluation

- Opportunities for improvement included items such as labeling the emergency fuel shutoff, placing barrier/cones on the roads to TFS when helos are operating, ensuring Alpine Air has access to helo survey results, and improving emergency response coordination between Battelle ARO, Alpine Air, and UAF.
- Many opportunities have been addressed and all remaining opportunities for improvement will be addressed by 1 June, 2025



Feedback, Questions, or Concerns?

- The Battelle ARO Team welcomes feedback on our support to science at any time and is committed to providing the best possible support to science at Toolik Field Station
- Please do not hesitate to reach out to our team with questions or concerns



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