

Ensuring Safe Paramotor Operations at Emmett Municipal Airport

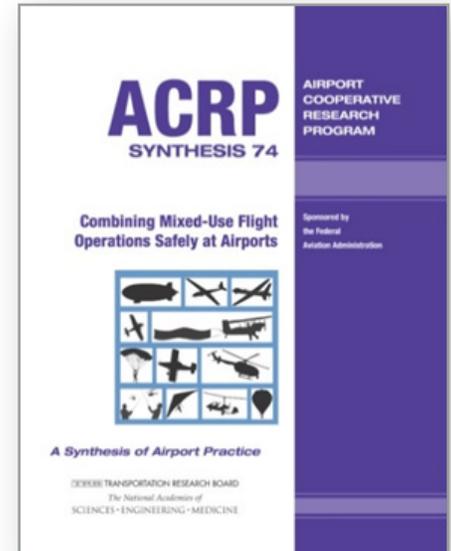
Paramotors Create Uncharted Safety Concerns

The Federal Aviation Administration (FAA) requires airports that are open to the public to accommodate mixed-use aeronautical activities. That means that aircraft such as gliders, helicopters, balloons, blimps, and more have the right to use an airport's airspace and runways while receiving the same operational and logistical accommodations as planes. But, airport operators sometimes struggle to handle these diverse aeronautical activities, which introduce unique and often unfamiliar operating characteristics.

Such was the case in 2019 at Emmett Municipal Airport in Emmett, Idaho, a state-supported public-use airport outside of Boise. Several airplane pilots raised safety concerns

about paramotors—ultralight, engine-powered paragliders that are launched by foot or dolly. At the time, Emmett did not have an established traffic pattern for this mixed-use activity. As one of the area's busier airports and growing, this brought fears of airplane-paramotor accidents. These safety concerns were heightened because Emmett is a nontowered airport, meaning it lacks an air traffic control tower to monitor and direct paramotor users.

Jennifer Schildgen, an Airport Planner in the Airport Planning and Development section of the Idaho Transportation Department's (ITD's) Division of Aeronautics, was tasked with determining how Emmett Municipal Airport could safely incorporate paramotor activities into its current air traffic operations. Schildgen maintains the grant program and manages capital improvement plans for Idaho's non-National Plan of Integrated Airport Systems (NPIAS) airports, including Emmett. Airport leadership was particularly concerned about the legal ramifications of shutting down paramotor usage altogether, which would violate the City of Emmett's



grant assurances for receiving state airport funding. In search of a solution, Schildgen consulted *ACRP Synthesis 74: Combining Mixed-Use Flight Operations Safely at Airports*.

Accommodating Mixed-Use Aeronautical Activity Needs

ACRP Synthesis 74 provides guidance to help airport operators and policy makers understand the operational and logistical characteristics of mixed-use aeronautical activities—not only for paramotors, but also for activities ranging from aerial agriculture spraying and aerial firefighting to airships, parachuting and skydiving, and



Above: A pilot takes to clear skies in a paramotor (Source: Michael Kubler via Unsplash).

unmanned aircraft systems. Most importantly, the synthesis explains how to safely accommodate these activities and address their unique needs, in the air and on the ground. The synthesis also focuses on integrating mixed-use activities into the daily operations of an airport, rather than treating them as special, one-off events.

In addition to providing a general overview and a foundation for understanding FAA requirements, *ACRP Synthesis 74* provides in-depth descriptions of specific aeronautical activities, including their basic operating practices and needs, safety operations, hazards and risks, regulatory issues, and related resources. Moreover, nine case studies from across the country demonstrate how airport managers successfully oversaw aeronautical activities at their airports. Airport operators can use the wealth of information that *ACRP Synthesis 74* provides to create effective oversight rules and procedures

for their own mixed-use activities, and that's exactly what Emmett Municipal Airport did.

Integrating Safe Paramotor Use into Daily Operations

ACRP Synthesis 74 served as guidance for Schildgen as she prepared the *Emmett Airport Paramotor Usage* report, which provides recommendations for the City of Emmett to use to develop local procedures for all types of aeronautical activities. Drawing on the case studies and a sample mixed-use traffic pattern in the ACRP synthesis, Schildgen's report suggests that the City enhance safety by separating traffic patterns (i.e., the procedures for taking off, departing, arriving, and landing at Emmett) for various flying activities and establishing their pattern altitude 500 feet below the standard pattern.

Additionally, in accordance with other safety guidance in *ACRP Synthesis 74*, the Emmett paramotor report notes that the ITD Division of Aeronautics could update the airport's sectional aeronautical chart—a navigational aid that provides topographic information and visual checkpoints for pilots—so that it depicts ultralight aircraft activity and alerts general aviation operators of paramotor usage. It also highlights *ACRP Synthesis 74's* recommendation that airport leadership consider

“Once [the] issue was handled, it was ‘all go’ at the Emmett airport. Everything I took from ACRP and gave to the Emmett airport manager, they incorporated into their practices.”

—Jennifer Schildgen

requiring operators of nontypical flying activities to carry commercial insurance.

Ultimately, Schildgen notes, Emmett Municipal Airport “took every bit of advice” from *ACRP Synthesis 74*, including requiring liability insurance for paramotor operators, establishing a designated place that gives them ample room to take off and land, and implementing safety measures such as having paramotor users carry a radio that allows them to listen to radio traffic and know when airplanes are approaching or departing. Since incorporating these procedures into its operations, the Emmett airport has not reported any further complaints from airplane pilots about paramotor safety. This success has led airport management to consult other ACRP reports, particularly pavement guidelines for small airports. “These reports are amazing for teaching,” Schildgen emphasizes. “But, it's not like a textbook. It's actually something you want to read.”



Above: Runway at Emmett Municipal Airport (Source: Jennifer Schildgen, ITD Division of Aeronautics).

ACKNOWLEDGMENT OF SPONSORSHIP: This work was sponsored by the Federal Aviation Administration and was conducted in the Airport Cooperative Research Program, which is administered by the Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine.

DISCLAIMER: The opinions and conclusions expressed or implied in ACRP publications are those of the research agencies. They are not necessarily those of the Transportation Research Board or the program sponsors.