National Transportation Safety Board

Hageland Aviation

Cessna 208B Grand Caravan

October 2, 2016

Togiak, Alaska

Marvin Frantz

Operational Factors

Terrain Awareness and Warning System (TAWS)

- Required for certain Part 135 operations
- Provides alerts using GPS and terrain database
- En route, alerts begin when terrain ahead is within 700 ft of aircraft altitude
- Part 135 allows day VFR flight as low as 500 ft agl
- Disparity leads to nuisance alerts from TAWS

TAWS

- Hageland pilots would routinely inhibit nuisance alerts when flying low
- Simulation indicated nearly continuous TAWS alerts during accident flight
- Crew of second flight inhibited TAWS alerts

TAWS

- Accident crew likely inhibited TAWS alerts
- Hageland provided no formal guidance on inhibiting and uninhibiting alerts
- Practice of routinely inhibiting TAWS alerts was contrary to manufacturer's guidance

TAWS

- Routinely inhibiting alerts could lead to complacency regarding terrain threats
- Frequent nuisance alerts could lead to reduced regard for valid TAWS alerts

TAWS

- Due to switch design, when inhibited, alerts remain inhibited until further action is taken by pilot to uninhibit them
- Pilots may unintentionally fly for extended periods without TAWS protections

Flight Data Monitoring (FDM) Program

- Collection and analysis of flight data from routine operations to improve safety
- Benefits include:
  - SOP compliance confirmation
  - Identifying and correcting unsafe operational trends

FDM Program

- Previous NTSB recommendations to require FDM programs for Part 135 operators
- Hageland began FDM program as part of postaccident agreement with FAA
- While awaiting FAA action, nongovernmental safety organizations can promote FDM

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