



National Transportation Safety Board



Human Performance and Organizational Aspects

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Human Performance

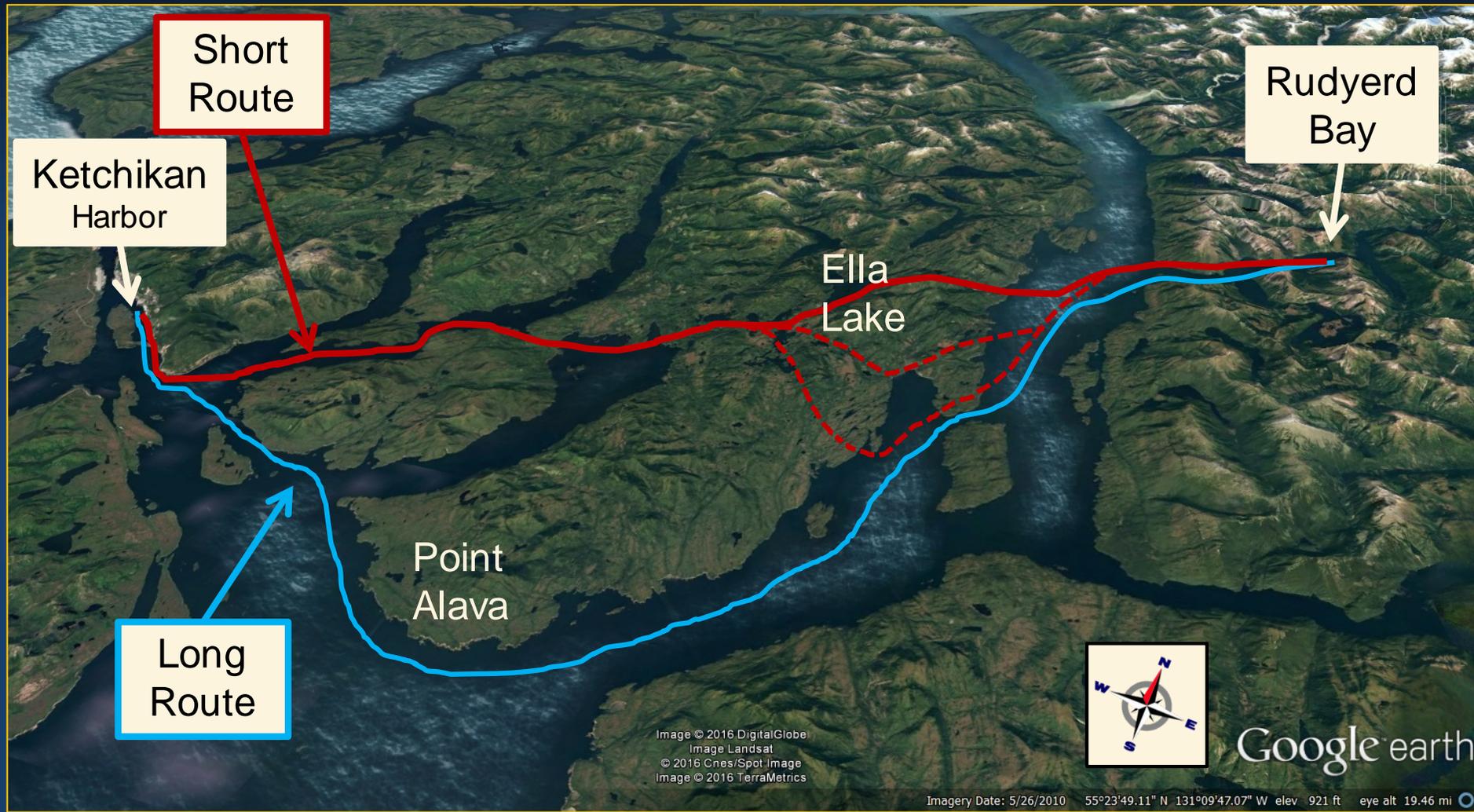
Pilot's Route Choice



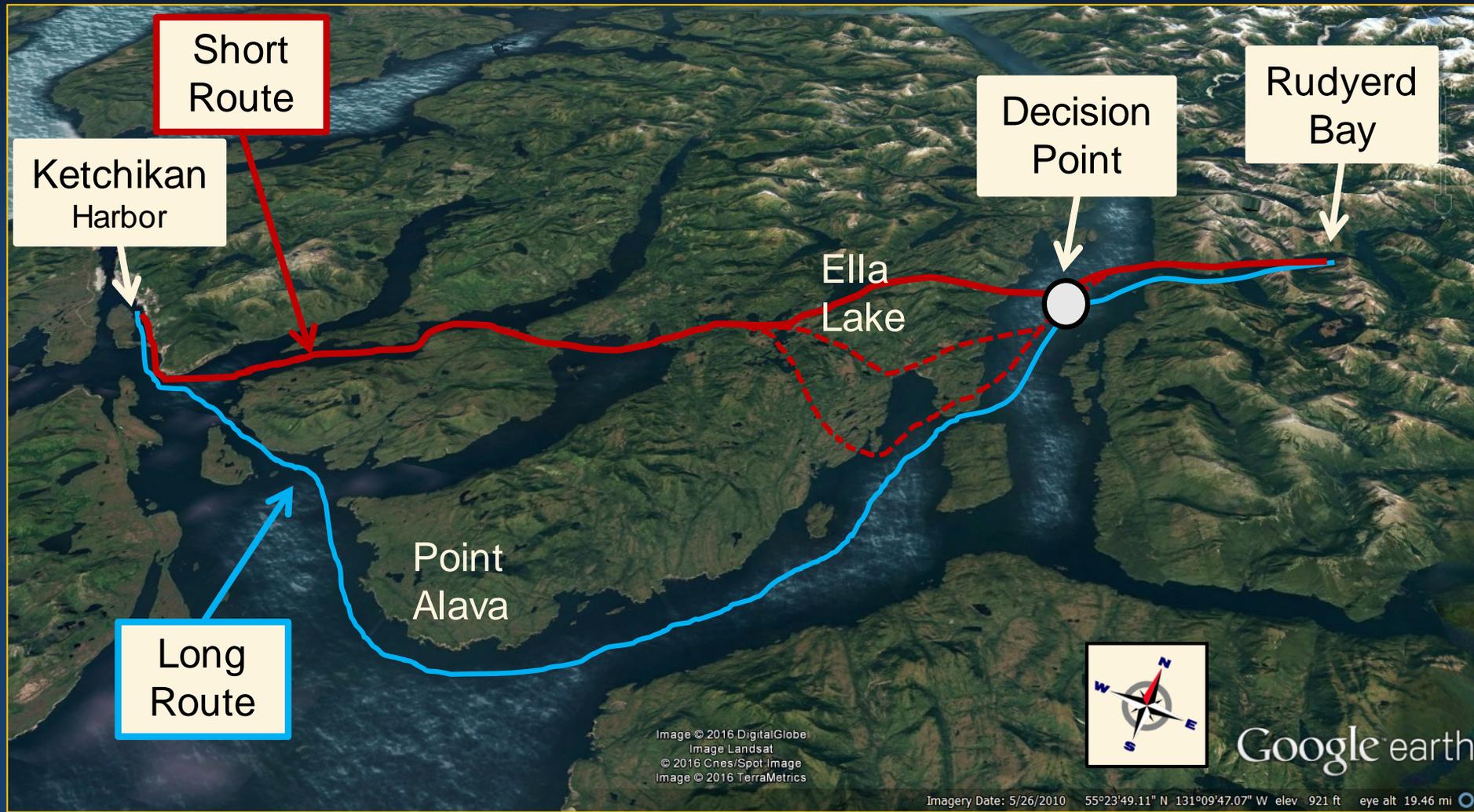
Pilot's Route Choice



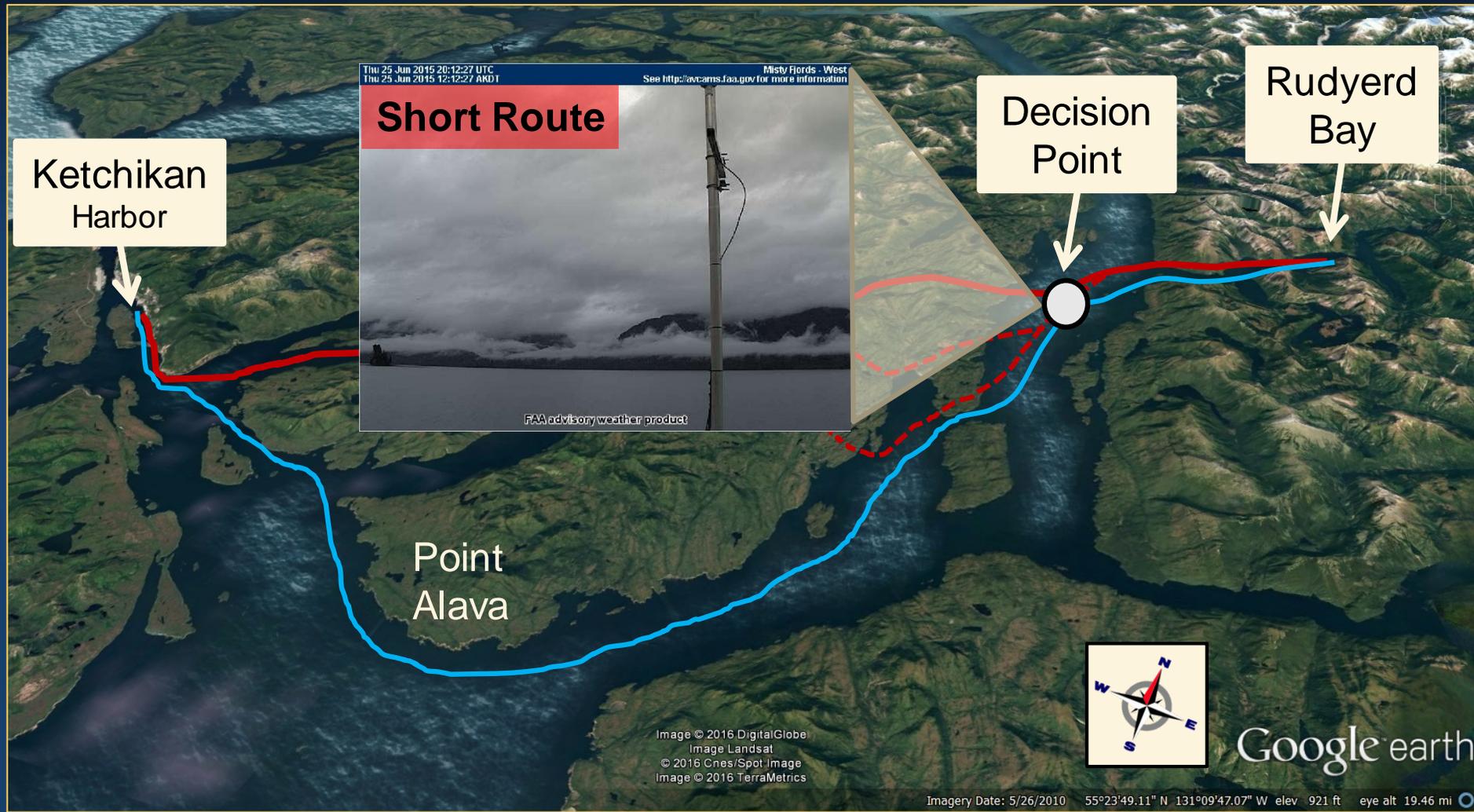
Pilot's Route Choice



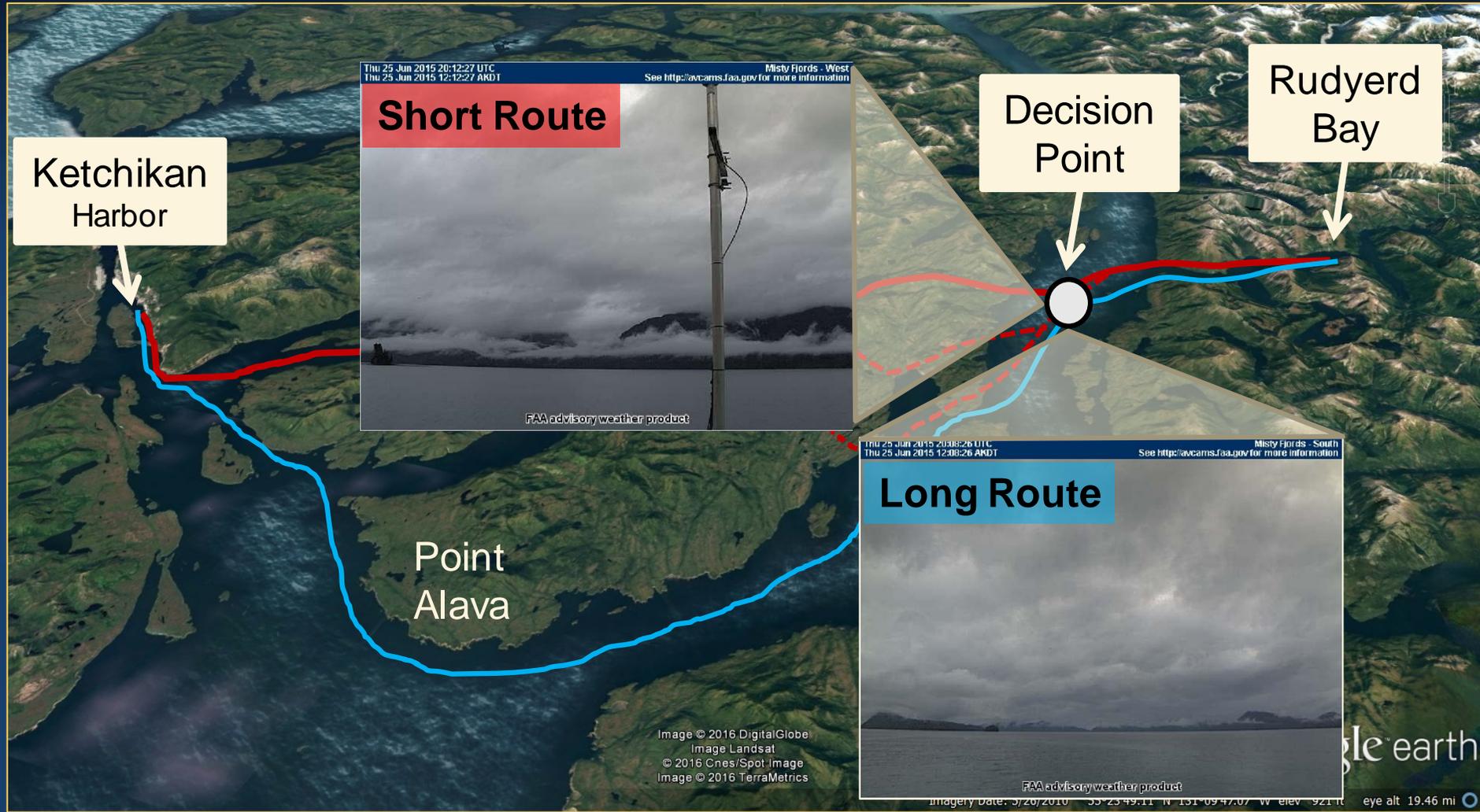
Pilot's Route Choice



Pilot's Route Choice



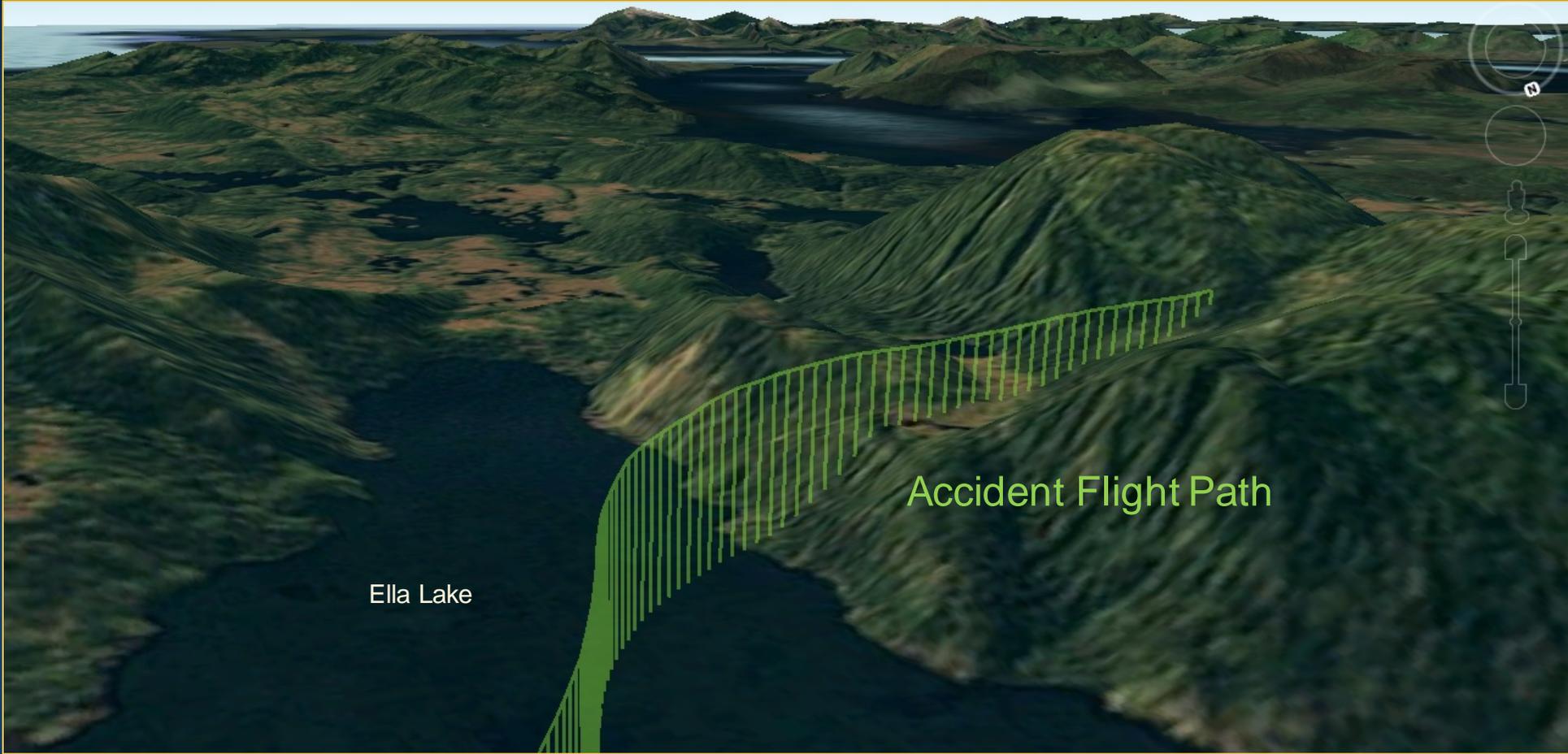
Pilot's Route Choice



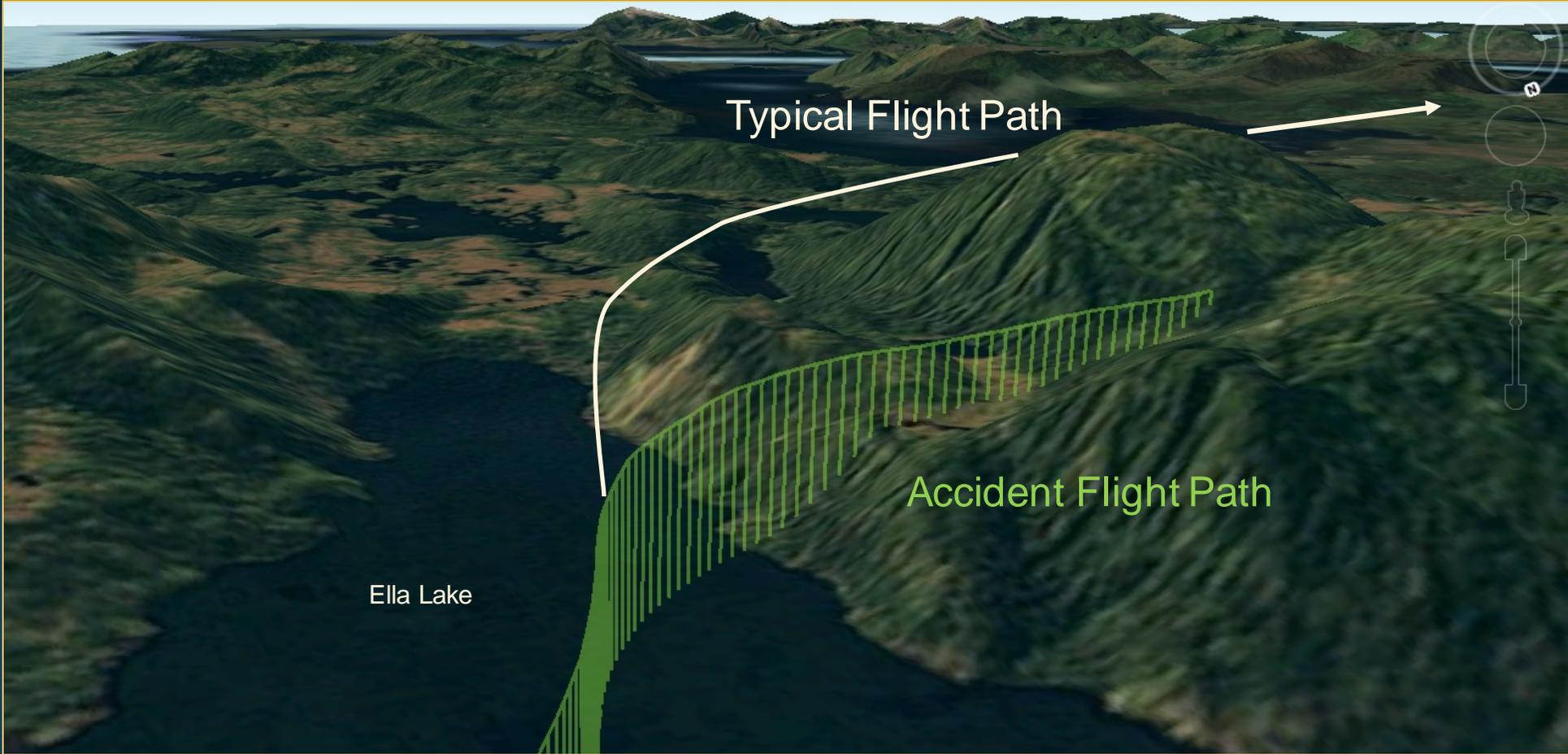
Likely Influences on Pilot's Route Choice

- Schedule pressure
- Peer influence

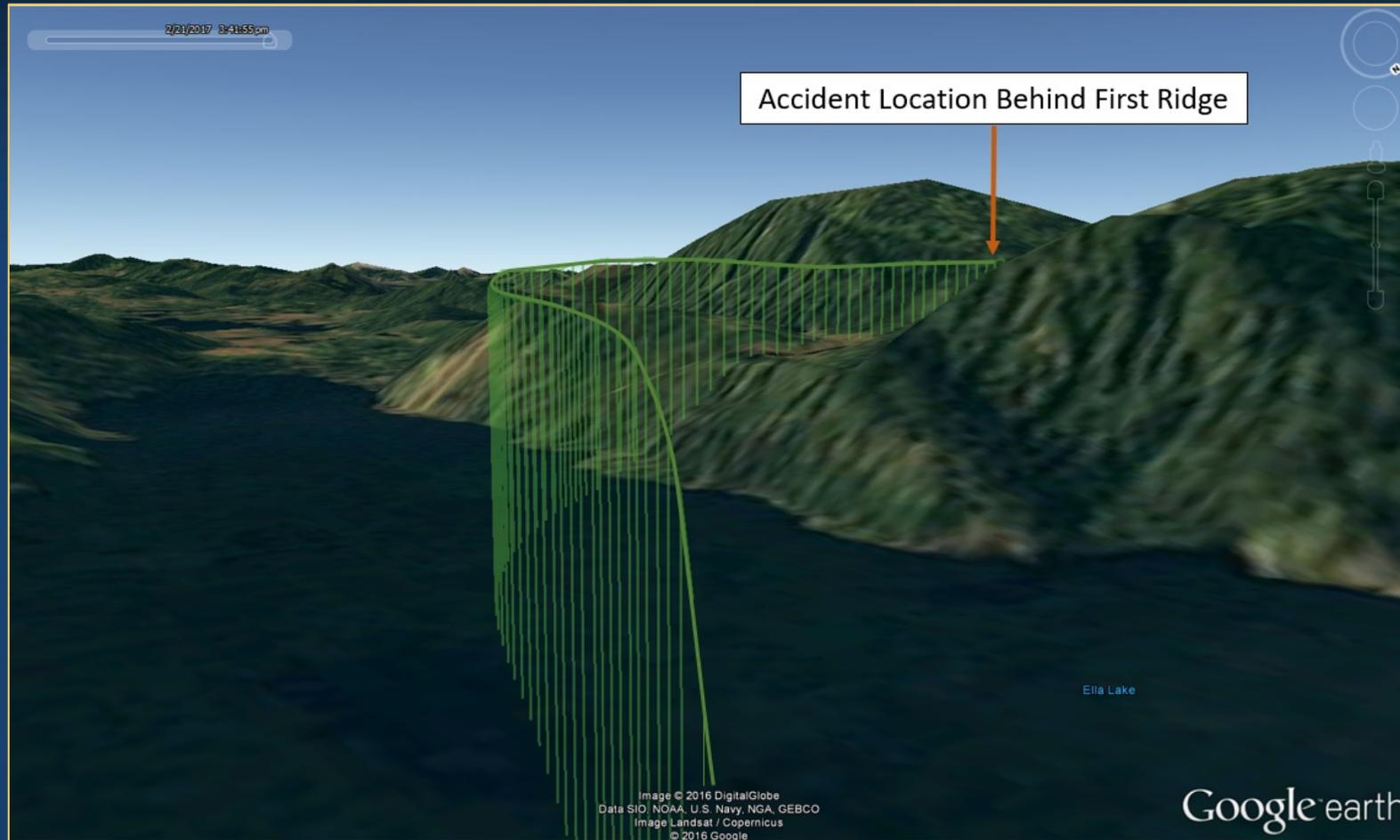
Pilot's Route Deviation



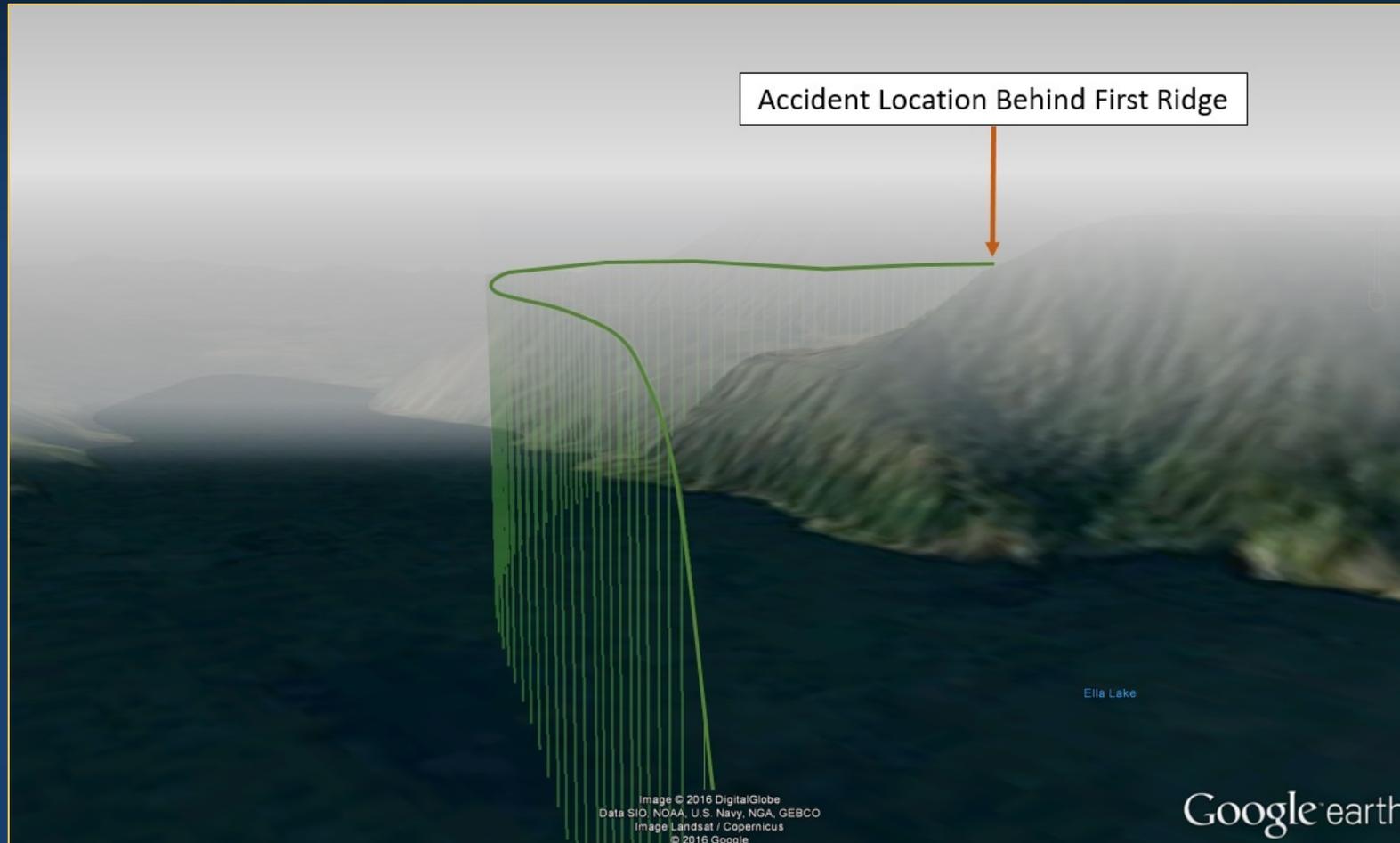
Pilot's Route Deviation



Turn Toward High Terrain



Turn Toward High Terrain



Risk Factors for Geographic Disorientation

- Degraded visibility
- Lower-than-usual vantage point
- Short time flying in local area

Likely Influences on Pilot's Continuation of Flight in Instrument Meteorological Conditions (IMC)

- Company culture
- Peer influence

Terrain Awareness and Warning System (TAWS)

- Alerts incompatible with type of operation
- High frequency of nuisance alerts
- Pilots routinely disabled alerts

CFIT-Avoidance Training

- Included ground, airplane, and cue-based (simulation) training
- Pilots practiced reversing course to escape IMC
- Training was insufficient to overcome cultural and peer influences



Promech Safety Program

- Lacked structure and clear lines of responsibility
- Hazard reporting program was under-utilized
- Company was unaware of recent safety-related incidents

Ketchikan Air Tour Operations

- Competitive industry with short season
- Violations of FAA weather minimums common
- ADS-B data showed operations below FAA minimum altitudes, low-altitude course reversals in confined areas

Need for Conservative Weather Minimums

- Promech operated when some other companies canceled
- Some passengers were rebooked on Promech flights
- Some companies paid economic penalty for conservative safety decisions; those willing to operate reaped economic benefits

Effect of Cruise Line Ship Schedule

- Passengers booked tour as cruise line shore excursion
- Flight was scheduled to return to Ketchikan shortly before the ship's "all aboard" time
- Tour was running late

