Friedman Memorial Airport

FINDINGS AND RECOMMENDATIONS OF THE FMA VOLUNTARY NOISE ABATEMENT COMMITTEE

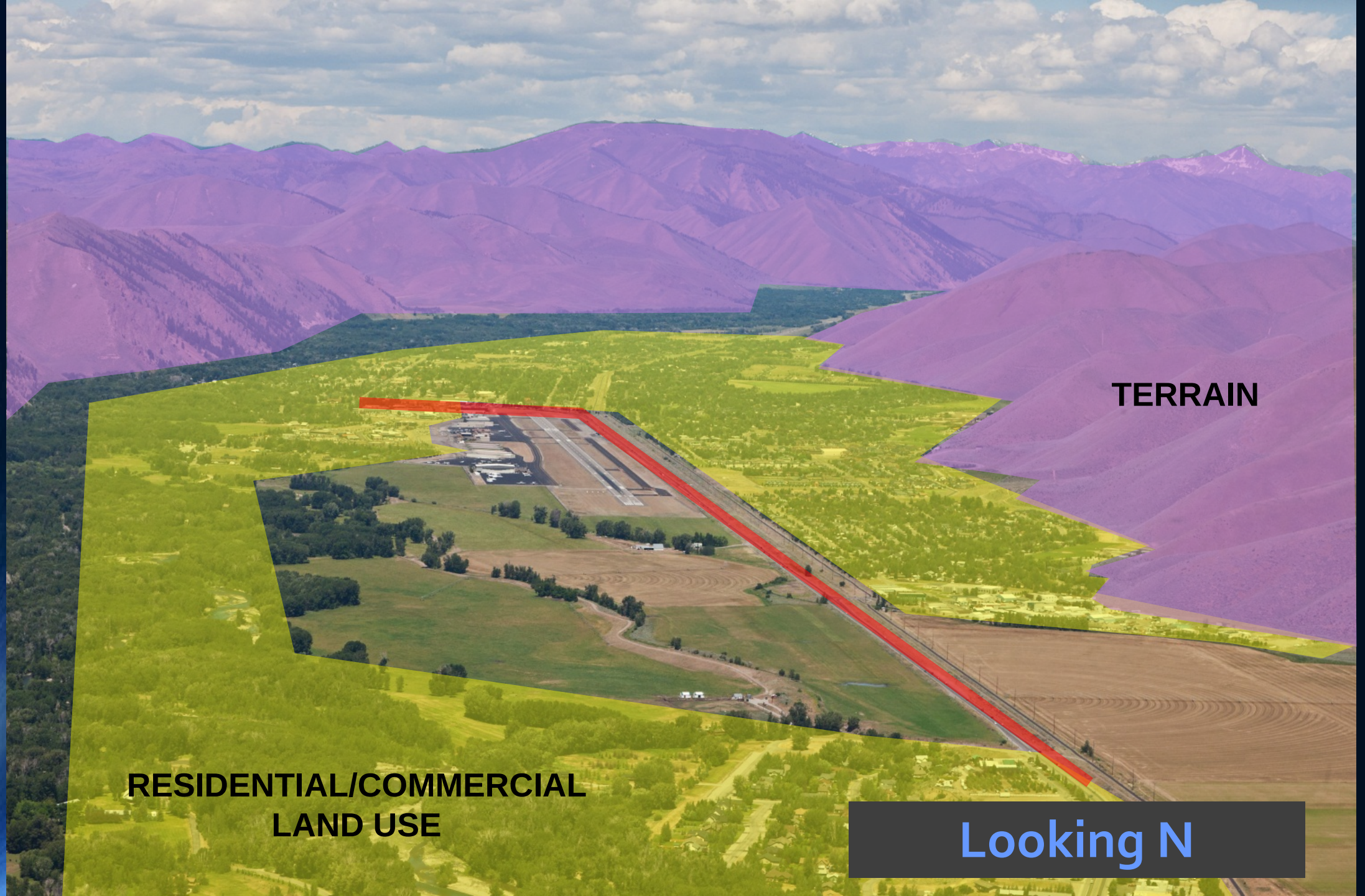
Informal Presentation

Your Questions and Comments Invited

Introduction

SUN Has Unique Operational Aspects

- Constrained mountainous environment
- Predominantly one way in/one way out…
  - Arrivals from the south
  - Departures to the south
- Significant development around the airport
  - City of Hailey – north
  - City of Bellevue - south


TERRAIN
RESIDENTIAL/COMMERCIAL
LAND USE
Looking N


Looking SE

Aviation and Airport Terminology

- Airport
  - SUN=FAA's 3-letter identifier
  - FMA=Friedman Memorial Airport

    These two abbreviations are used interchangeably
- FAA
  - Federal Aviation Administration
  - SUN is part of National Airport System
  - Sponsor Obligations and Grant Assurances
  - **Legally must allow air traffic activity 24/7**

FRIEDMAN MEMORIAL AIRPORT
SUN
HAILEY, IDAHO ✈ iFLYSUN.COM

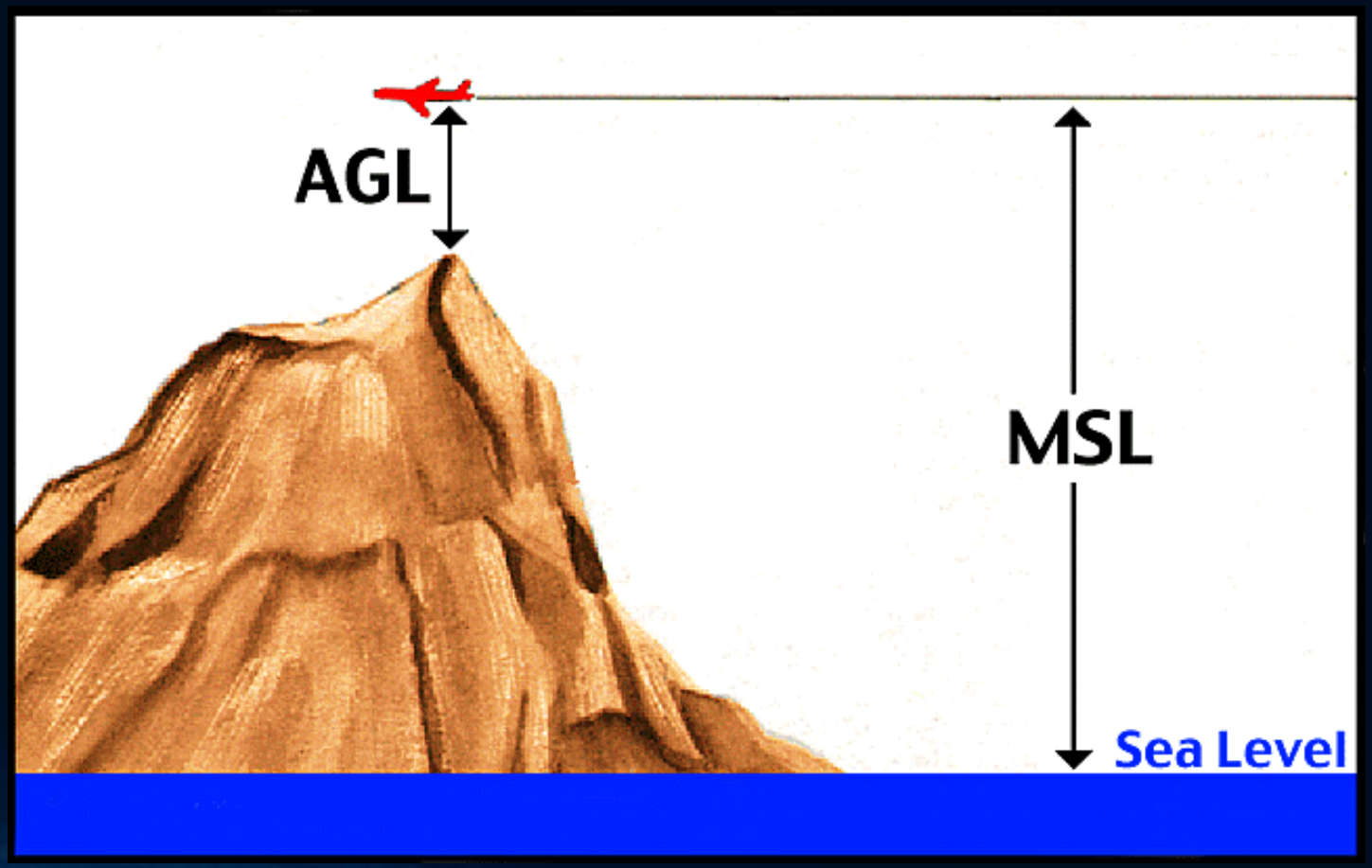
SUN Basics

- General Aviation and Commercial Air Carrier Activity
- +/- 26,000 take-offs and landings (operations) per year
  - +/- 15th busiest airport in Idaho for operations
- 70,000 Passenger Enplanements per year
  - 3rd for commercial air carrier passengers
- 95,000 lb. weight restriction

Aviation and Airport Terminology

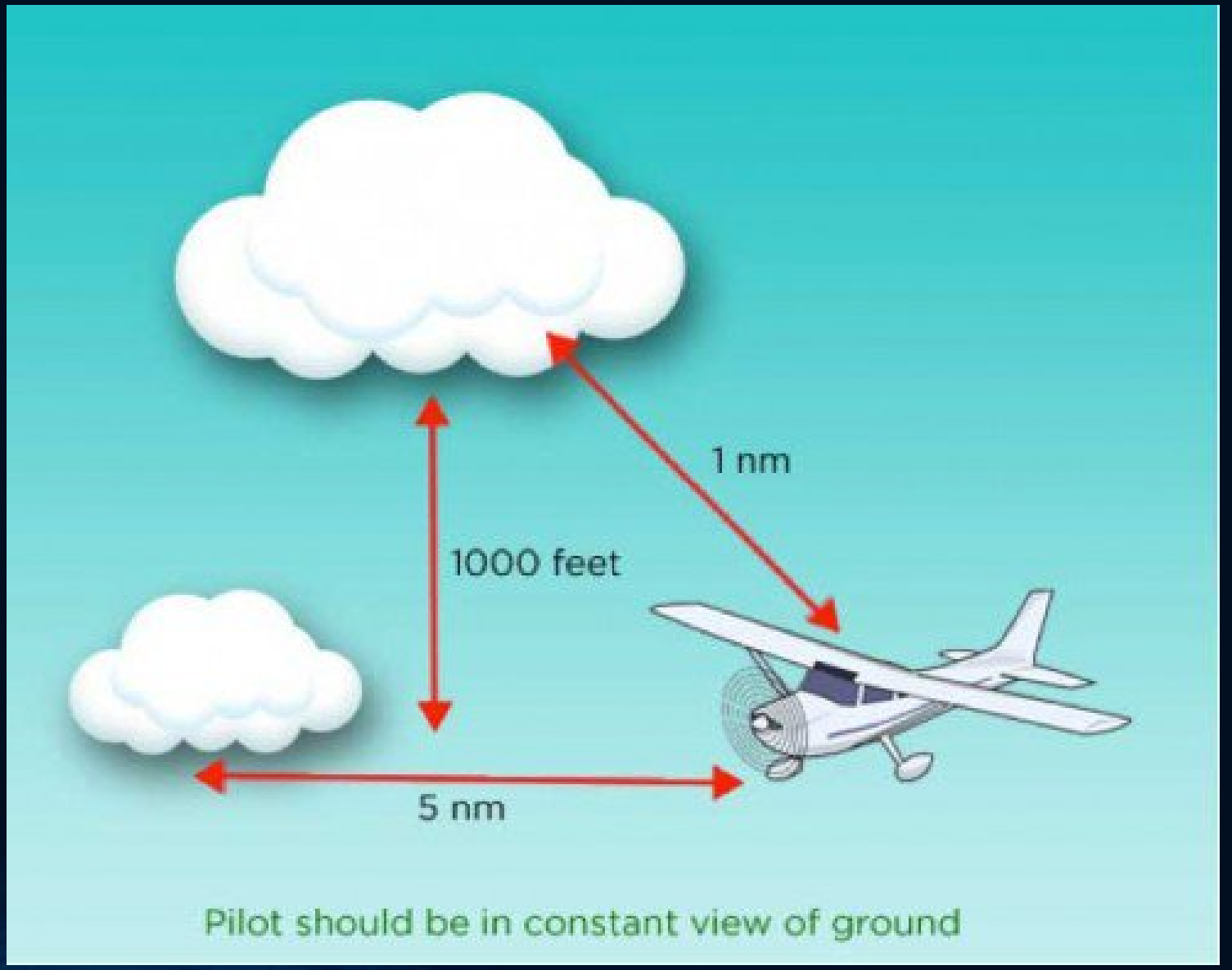
- "MSL" vs "AGL"
  - MSL = MEAN SEA LEVEL
  - AGL = ABOVE GROUND LEVEL

- SUN Elevation = 5,315 ft. MSL



Aviation and Airport Terminology

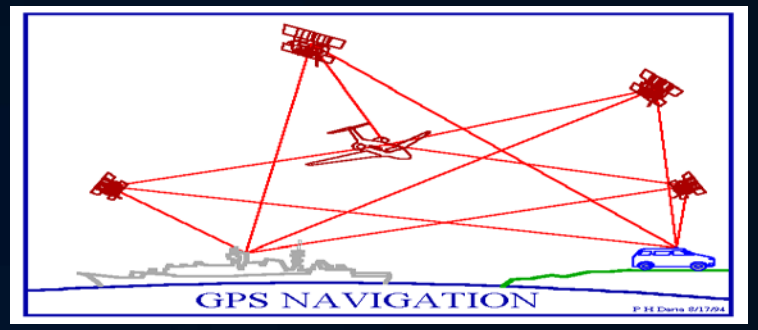
- "VFR"
  - Visual Flight Rules
  - Good weather



Aviation and Airport Terminology

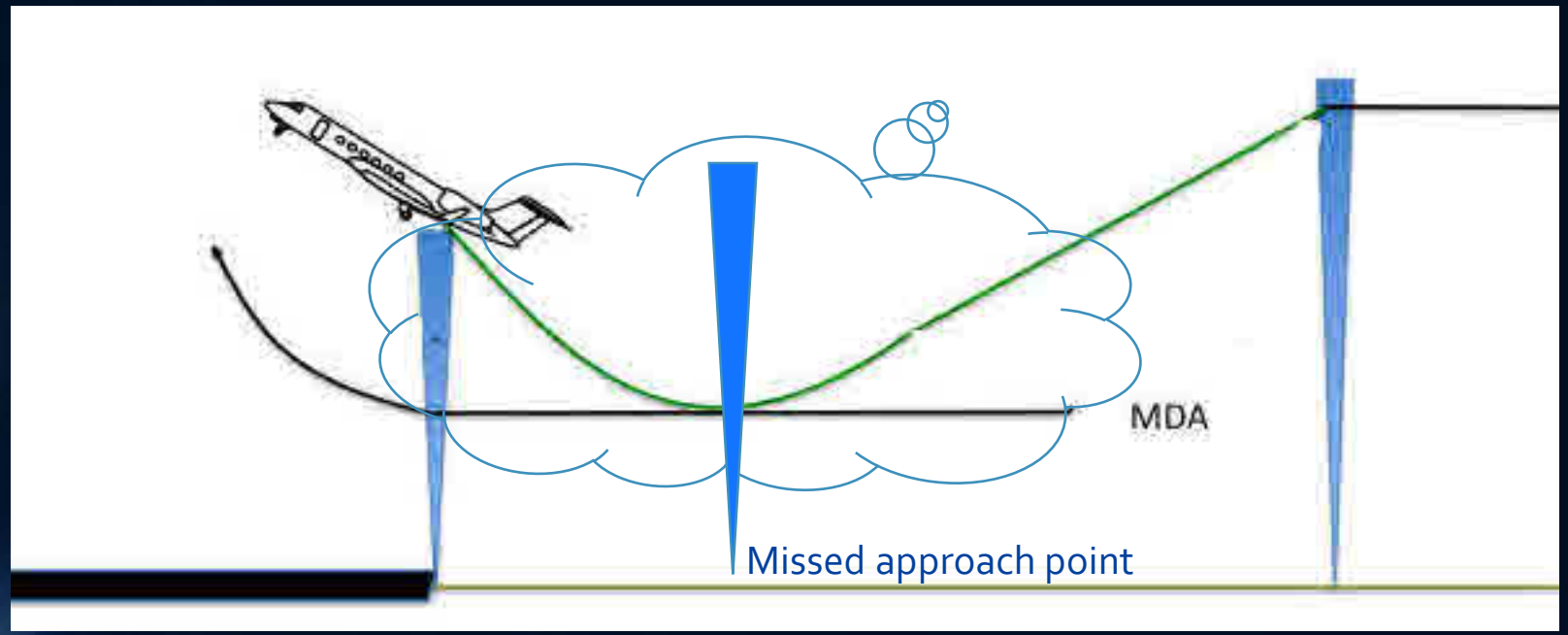
- "IFR"
  - Instrument Flight Rules
  - Weather-restricted visibility
- Instrument Approach Procedures
  - Instrumentation needed to land
    - Special aircraft equipment
    - Pilot training and certification

IFR approaches to SUN use GPS



Missed Approach

- If a pilot reaches the missed approach point shown on his display without having the runway in sight, he must terminate the approach and execute a high-power climb.



FMA Voluntary Noise Abatement Committee

Voluntary Noise Abatement Committee

- The current Voluntary Noise Abatement (VNA) Procedures were adopted in April, 2007.
- On March 8, 2016 the Friedman Memorial Airport Authority (FMAA), in response to community concerns, convened a new Voluntary Noise Abatement Committee (VNA Committee) to review the existing procedures and recommend updates.
- Committee make-up:
  - Citizens of Hailey and Bellevue
  - Pilots, both private and commercial
  - City and county officials
  - Airport management

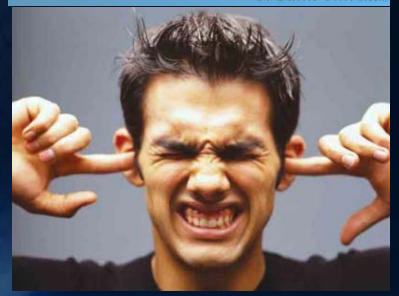
Noise Abatement Constraints

- SUN is legally required to allow 24/7 operations.
- Only the FAA can mandate noise abatement procedures, and then only when noise monitoring confirms average noise levels above a predefined threshold.
- SUN doesn't meet FAA minimum noise levels for mandatory noise abatement procedures.

- SUN, however, can adopt Voluntary Noise Abatement (VNA) procedures, and use education, peer pressure, and gentle persuasion to get pilots to comply.

Sound Can be Measured Scientifically, but Noise is Highly Subjective

- Loud rock music that is highly pleasurable to some, can be uncomfortable—even painful—to others.

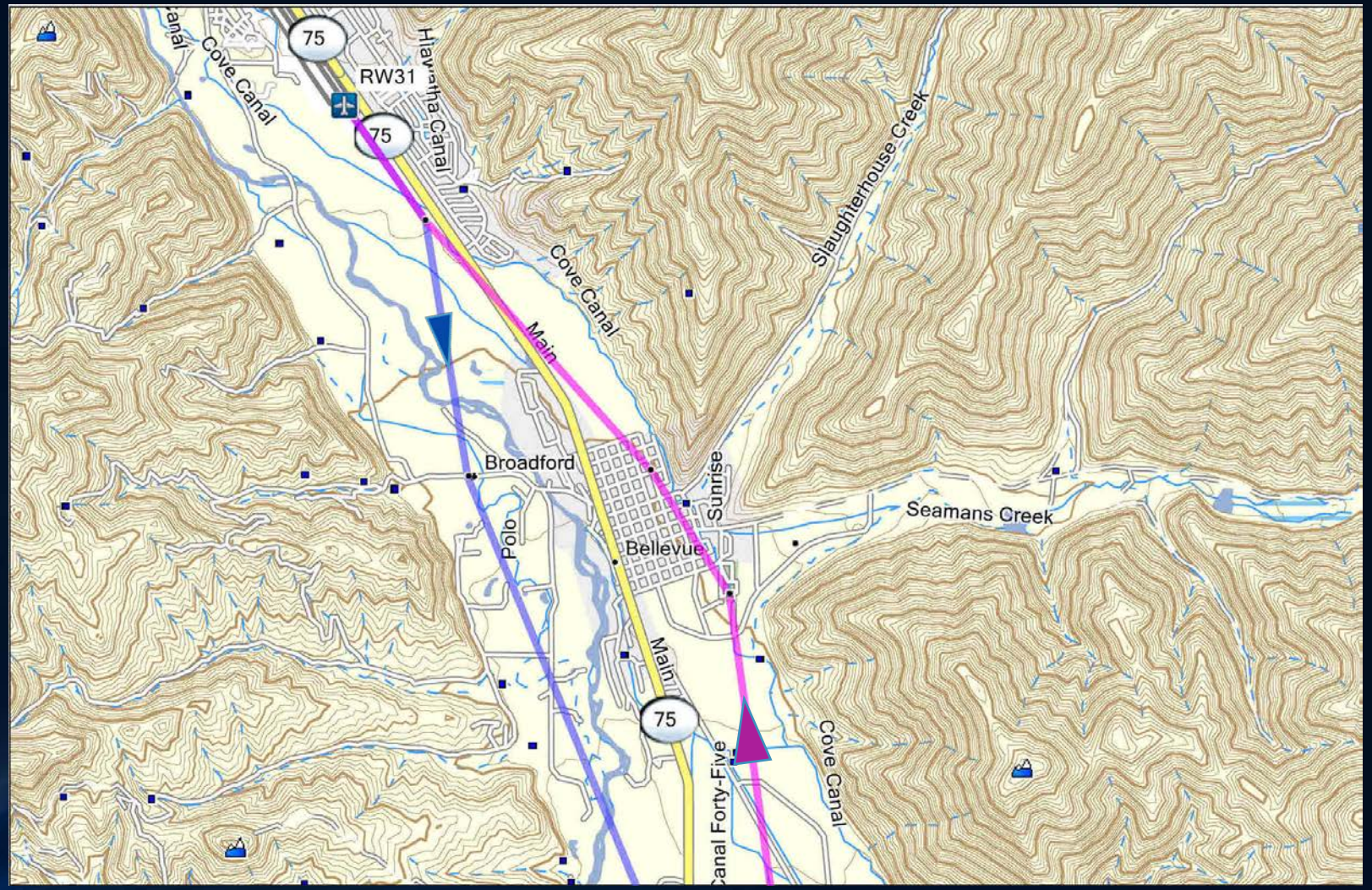


- 30 seconds of an overflying jet is more annoying than 30 minutes of a neighbor's lawn mower, even if the actual sound level, measured in decibels, is the same.

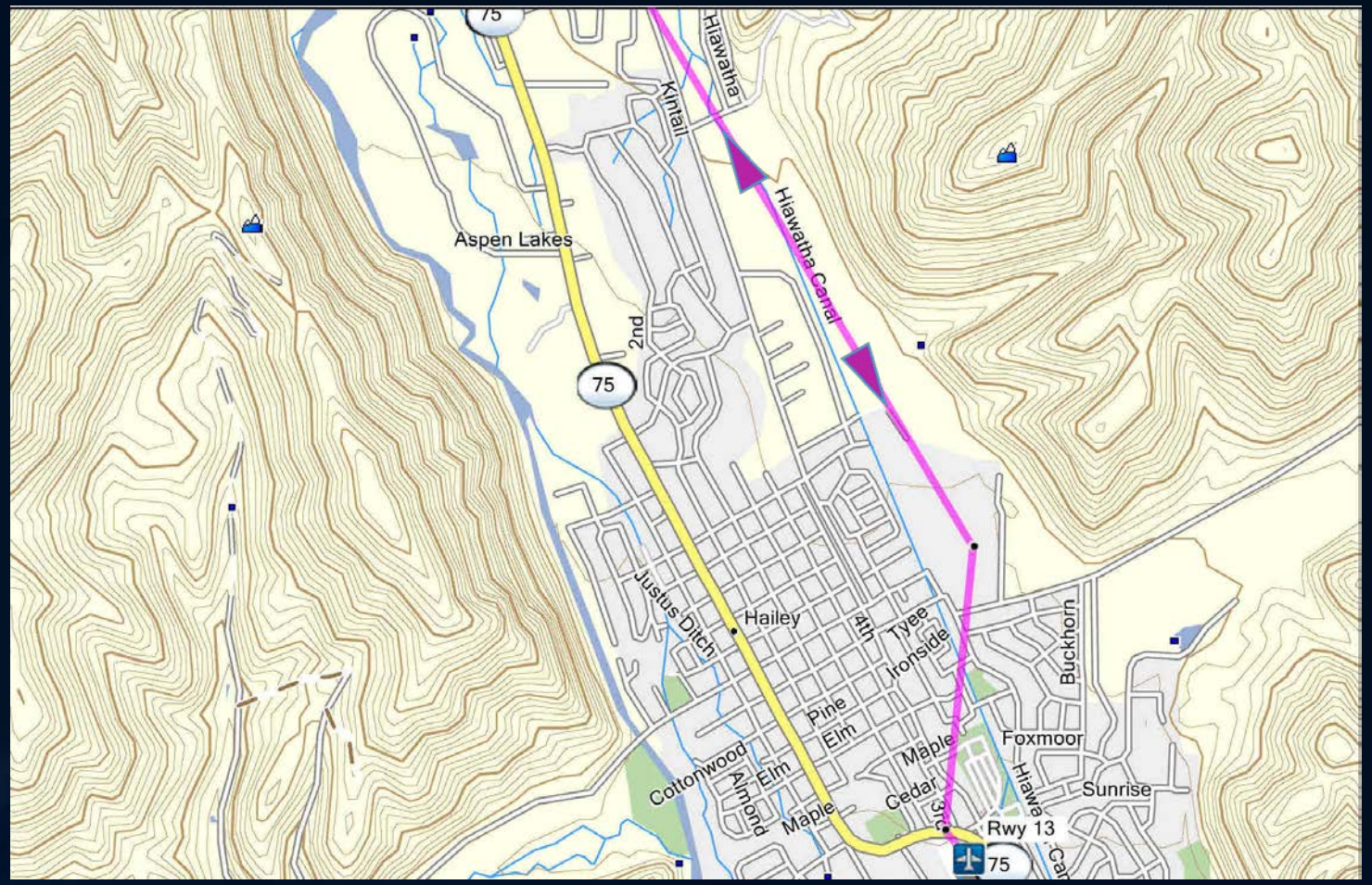
2007 Voluntary Noise Abatement Procedures

1. Weather permitting, aircraft over 12,500 lbs. were requested to arrive from, and depart to, the south.
2. Pilots were asked to fly specific paths to minimize noise over residential areas.

2007 VNA Flight Paths (South)



2007 VNA Flight Paths (North)



2007 Voluntary Noise Abatement Procedures

3. Pilots were asked to avoid operations between 11:00 pm and 6:00 am, except for emergencies, and preferably, not before 7:00 am.
4. Pilots taking off were asked to reduce power at 500' AGL.
5. Ground operations (such as pre-takeoff air conditioning) were restricted to 30 minutes.
6. Aircraft were requested to fly at 7,000 MSL (about 1,700' AGL) over Bellevue

Getting Compliance

- VNA Procedures are published in print and on the iFlySun.com web site.
- Signs are posted at runway ends.
- Meetings held with local pilot groups.
- Notices are sent to participants in special events.
- Every arriving and departing flight is asked to follow noise abatement procedures via ATIS broadcasts to pilots.
- Noise complaint hotline: every complaint or inquiry gets checked out.
  - Violators are sent a notice (strongly!) requesting them to comply in the future.
  - The person making the inquiry is given a follow-up call with the outcome.

Findings

Key Committee Findings

1. Most of the VNA procedures such as observing quiet hours, avoiding low-altitude flying, and operating to the south are being followed.

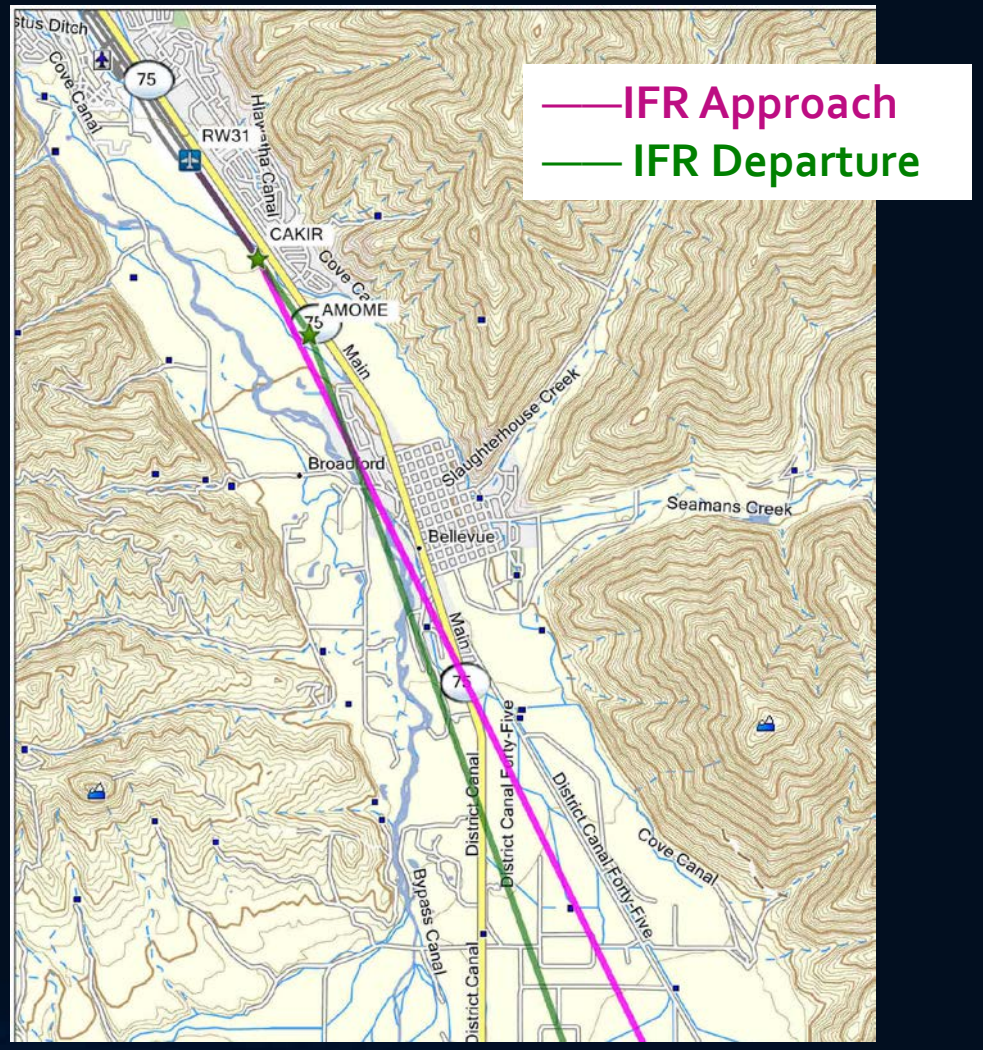
   - After-hours flights are typically either medical emergency flights or delayed airline flights.

2. Ground noise complaints, primarily noise from the power units used during pre-takeoff preparations, have dropped off to nearly zero since those operations were relocated to the south.

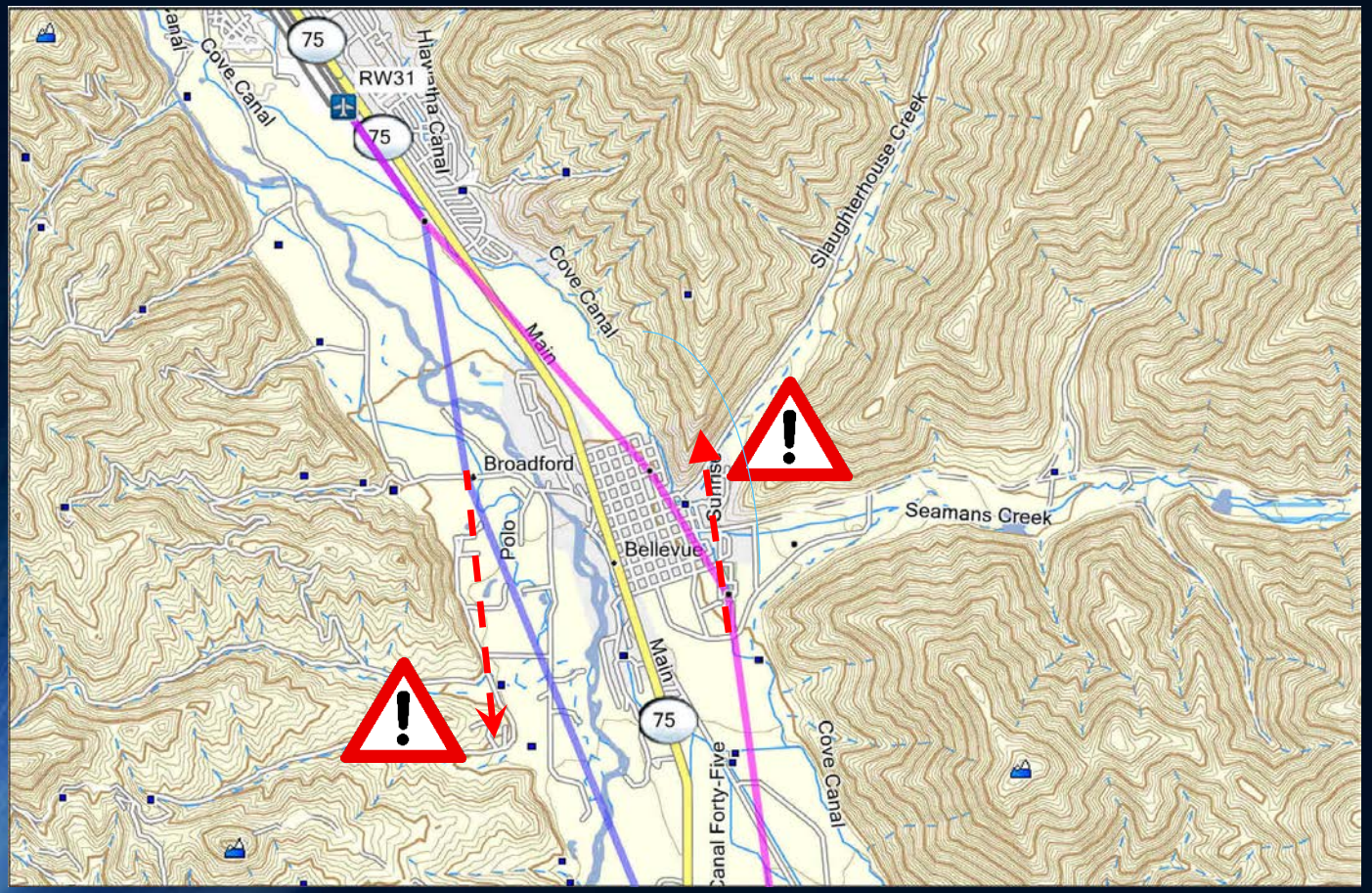
VNA Committee Findings

3. Aircraft flying IFR (Instrument Flight Rules) must follow FAA prescribed flight paths.

They can't fly the preferred VNA routes.

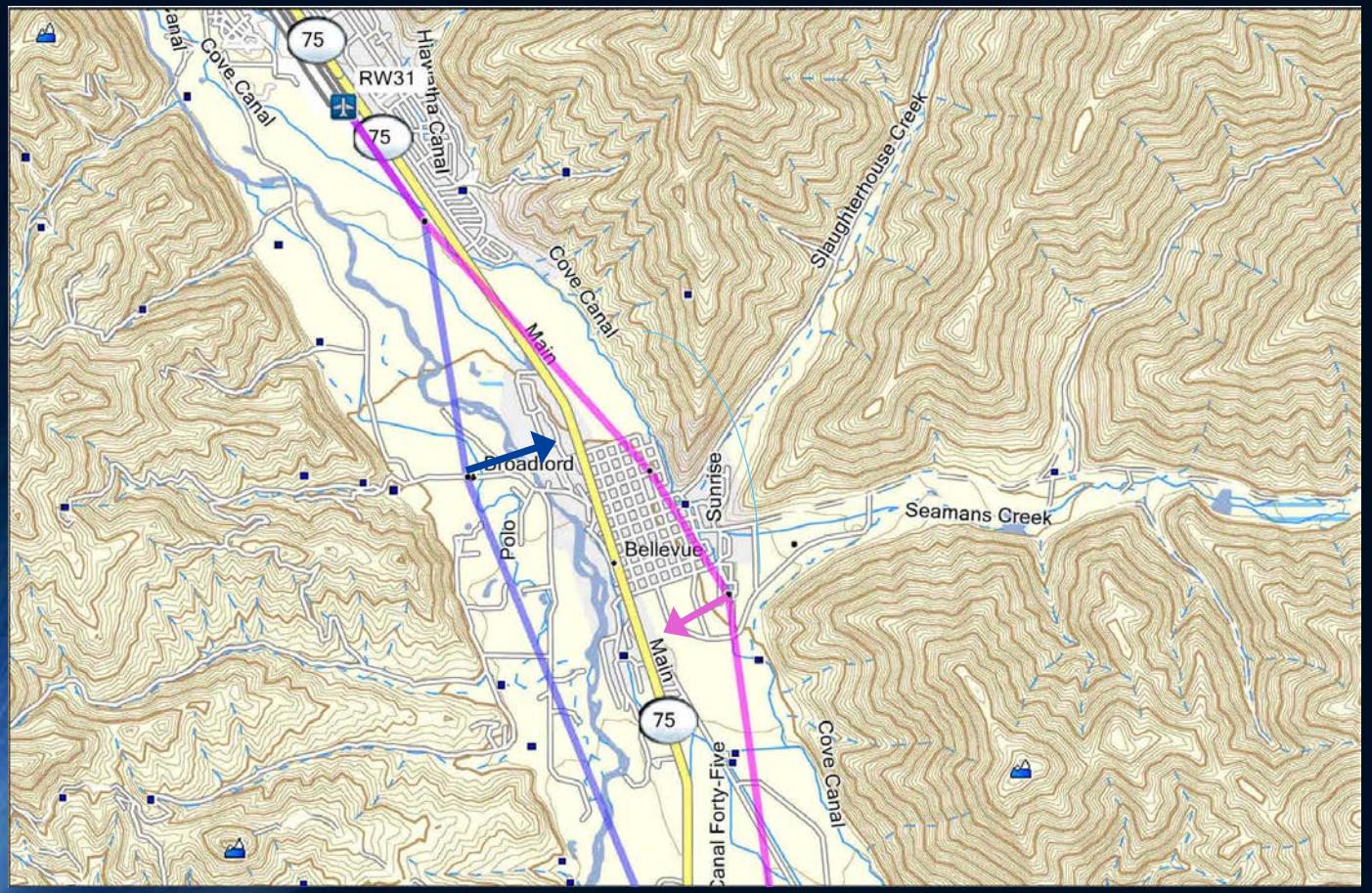


VNA Committee Findings



3. Most large and turbine-powered aircraft—and many smaller planes--have terrain warning systems

VNA Committee Findings



3. Most large and turbine-powered aircraft—and many smaller planes--have terrain warning systems

This forces pilots to fly closer to the center of the valley.

VNA Committee Findings

- Net result: flight traffic is concentrated over or near the center of the valley, directly over the center and west side of Bellevue.
- Citizen complaints that aircraft were not flying as far east or west as the published VNA procedures called for were substantiated.

VNA Committee Findings

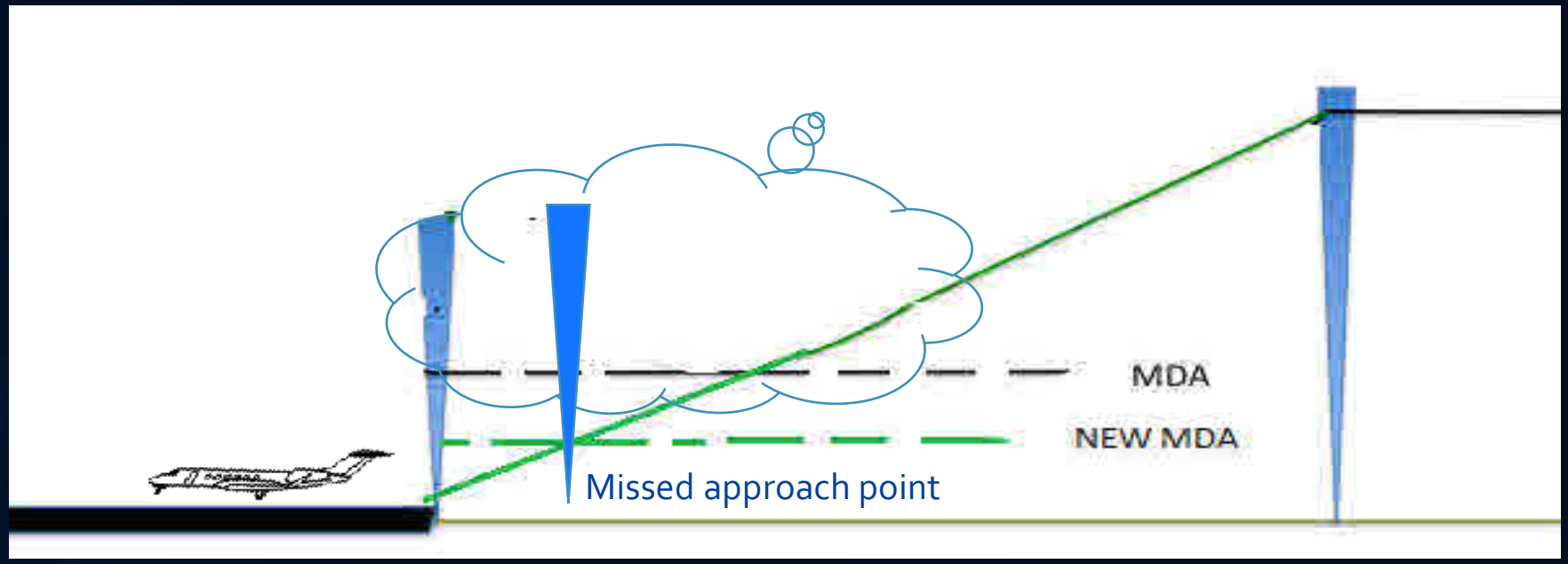
4. Aircraft noise should be substantially lower than in 2007.
   - FAA restrictions on loud aircraft have eliminated the two noisiest classes of jet aircraft.
   - The number of operations at SUN in 2015 was 51% below the number in 2007.
5. Although all the available information suggests that airport noise is lower than in previous years, that is not the perception of some of the people living under the flight paths.
6. There is a lot of data on airline flights and number of operations into SUN, but it is not complete, consistent, and does not track the type of aircraft.

VNA Committee Findings

7. Noise impact of the two new GPS approaches is expected to be mostly positive.

Successful Approach

- With a lower Minimum Descent Altitude (MDA), a flight is more likely to be able to break out below the cloud layer.

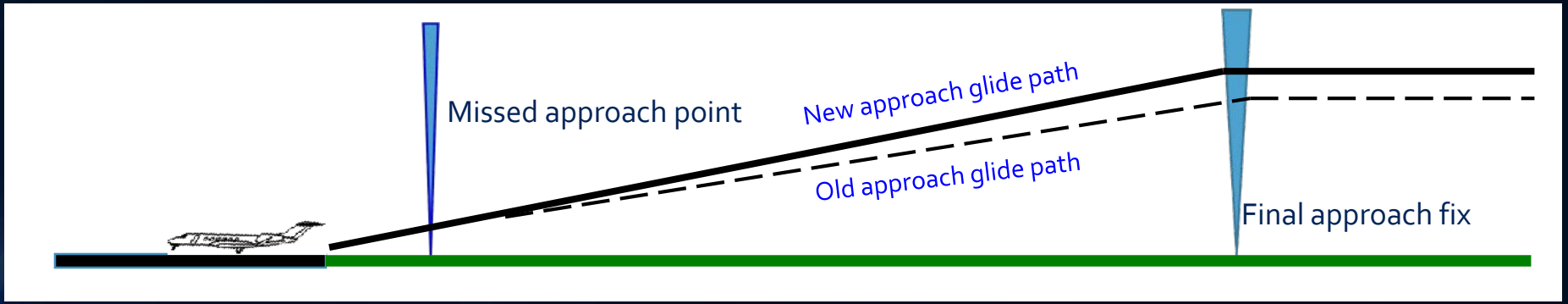


- **Result: Fewer high-power missed approaches & fewer "second tries."**

New Instrument Approach is Steeper

The new approach slope is steeper than the old one, from 3.11° to 3.5°.

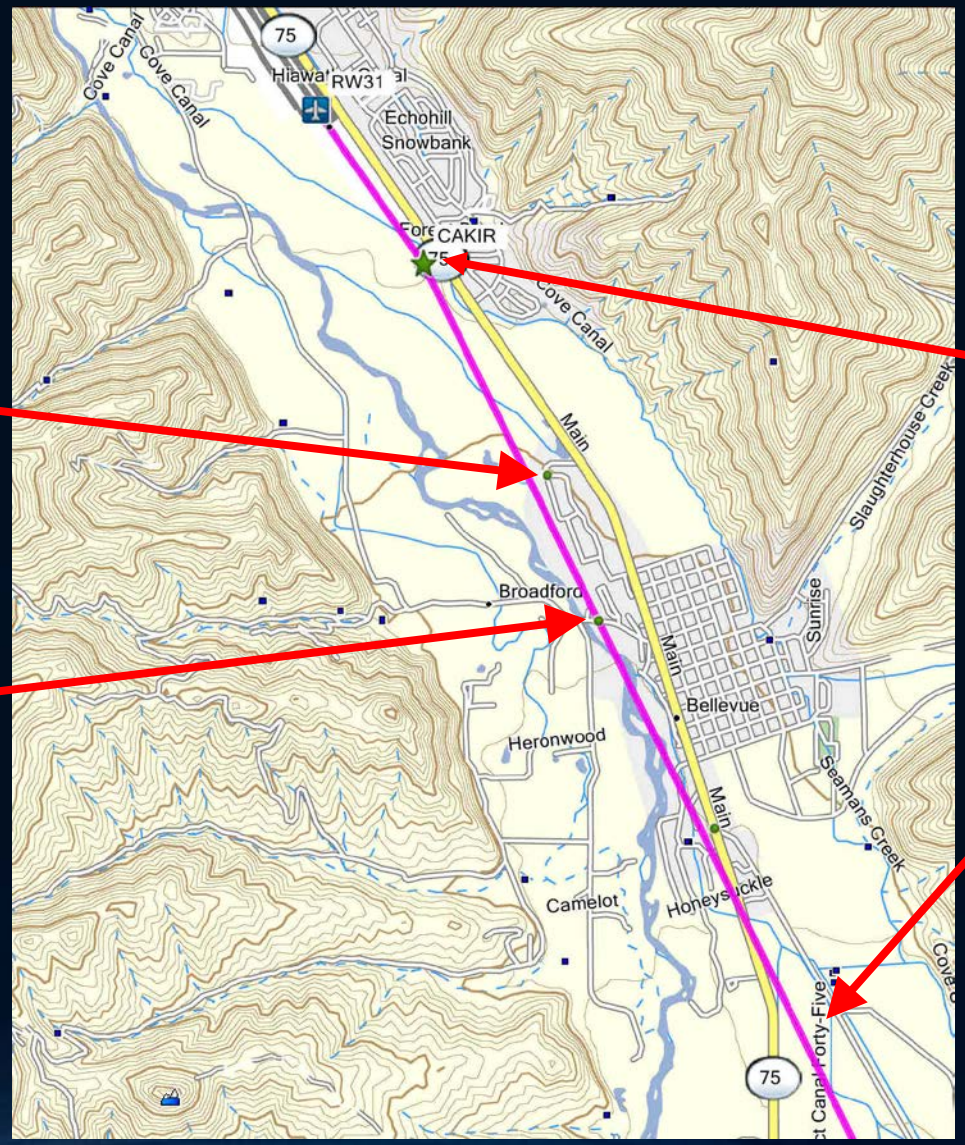
- At any point in the approach, glide path is approximately 12.5% higher than it was before.
- Because the approach is steeper, less power is required to maintain the glide path.



RNAV-X Approach Flight Path

Kirtley-Tendoy-
Melrose streets
714′ AGL (44′ higher)

Broadford Rd Bridge
911′ AGL (61′ higher)



South Woodside
(missed approach pt.)
354′ AGL (21′ higher)

Gannett & Main
1,230′ AGL (186′ higher)

VNA Committee Findings

8. Other Options for Noise Abatement are Limited

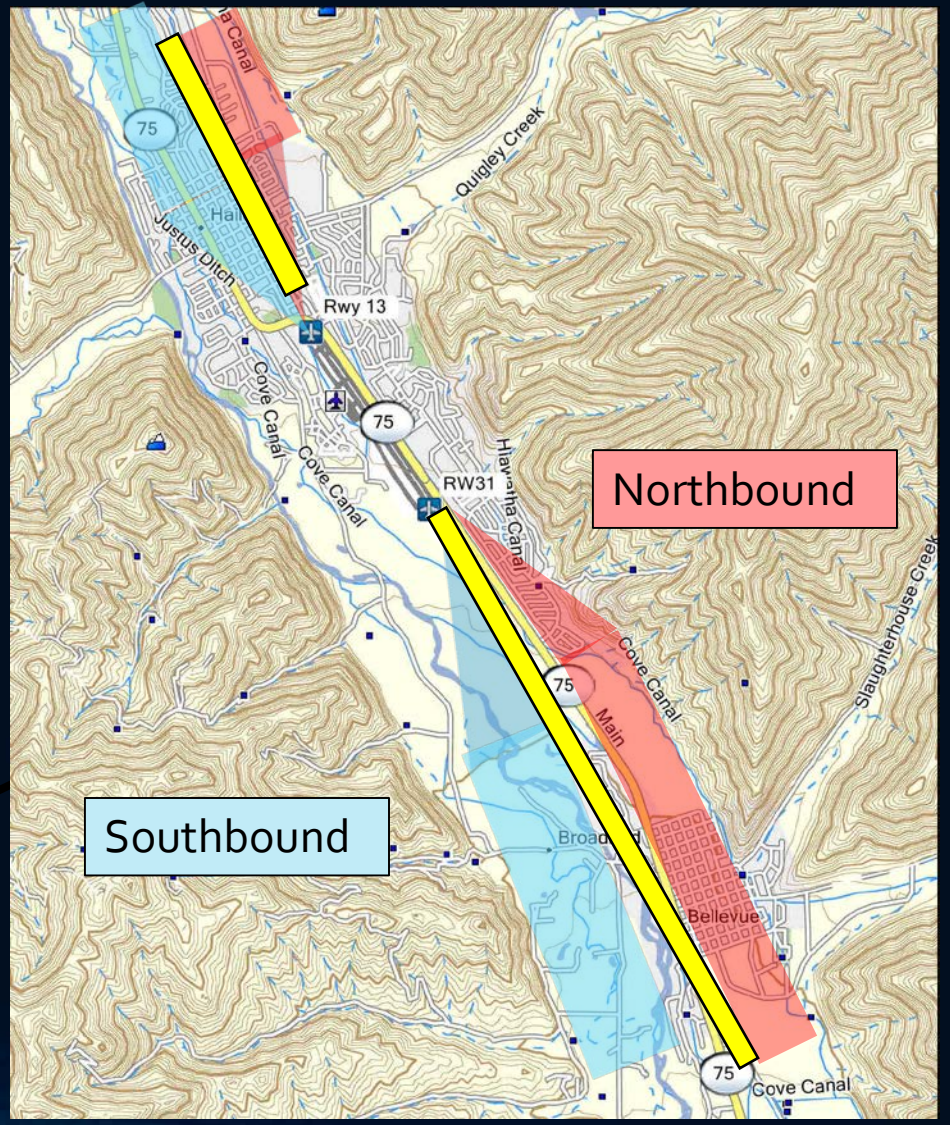
- A blast deflector at the north end of the runway would reduce some noise in Old Hailey, but would require adding an extra 500’ to the runway.
- A berm between the runway and Hwy 75 would not be effective, as the jet engines are mounted too high on the airplanes’ fuselages.
- Residents do not qualify for FAA noise mitigation grants because local building codes require more insulation for weather than the FAA recommends for noise mitigation.
- Growth in Hailey and Bellevue means that there are no feasible routes to avoid residential areas.

Proposals

Proposal 1: Traffic Zones

1. Define inbound and outbound zones rather than fixed routes.

- Avoid head-to-head traffic
- Allow pilots to stay as close to the sides of the valley as their operating limits allow.
- Avoid concentrating flight paths over any single neighborhood



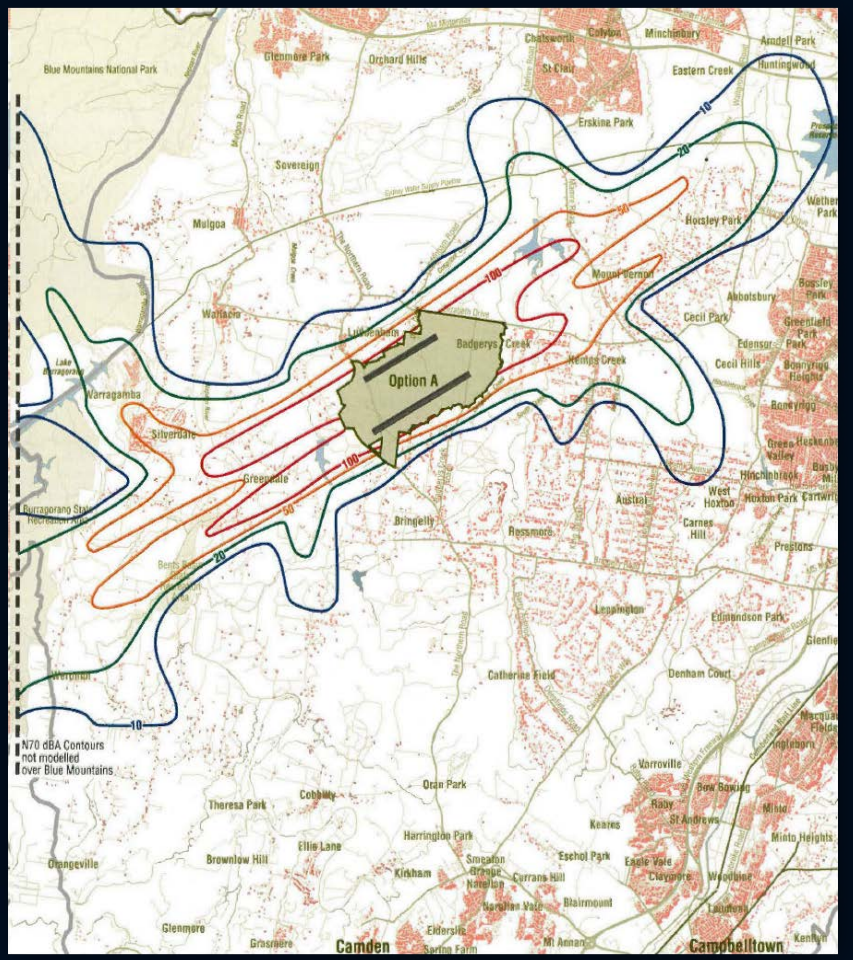
Proposals

2. Make improvements to the airport that will reduce the number of operations, in particular, adding back the lost general aviation parking area.
3. Encourage aircraft under 12,500 lb. to take off and land to the south, provided the aircraft and pilot can safely do so.
4. Request pilots to reduce propeller RPM as soon as it is safe to do so.
5. Get better data on current and projected noise levels.
6. Install ground-based ADS-B (aircraft tracking equipment) to accurately verify and respond to noise complaints.

Noise Modeling

Noise modeling is a way to get scientific data to back up (or refute) anecdotal information about airport noise.

- Noise modeling is a computer simulation of aircraft operations taking into account aircraft types, weather and surrounding terrain
- Noise modeling can predict and estimate noise levels at any point on a grid anywhere on the ground in the area surrounding an airport
- Can calculate peak and average noise levels.
- Scalable for differences in hourly and seasonal traffic.



Next Steps

- The VNA committee is holding a series of meetings in Ketchum, Hailey and Bellevue to review its findings and recommendations.
- "Coffee talk" or "town hall" format to encourage a two-way dialogue of information, comments, questions, and answers.
- Incorporate community comments into final VNA procedures.
- Publish final 2016 VNA procedures.

The committee will remain available, as requested by the FMAA Board, to advise on noise-related issues.

Committee Members

Bellevue	Susan Bernatas, Amber Mattias
Hailey	Walt Denekas (chmn), Peter Lobb
Blaine County	Pat Buchanan, Lisa Phillips
FMAA Board	Jacob Greenberg, Fritz Haemmerle
Pilot community	Steven Garman, Michael Rasch, John Strauss, David Wilson
Airport administration	Chris Pomeroy, Lisa Emerick, Cecilia Vega, George White, Rick Baird, Pete Kramer

- Special thanks to Susan Bernatas, Committee Secretary, who compiled the notes and conclusions from the committee meetings, and Chris Pomeroy and the pilots on the committee for their technical advice.

Questions and Comments