



# **Langley Air Force Base Air Installation Compatible Use Zone (AICUZ) Public Release Brief**

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# AICUZ OVERVIEW

- **AICUZ Background (Info)**
- **Langley's AICUZ Process (Info)**
- **Noise Contours (Info)**
- **Accident Potential (Info)**
- **Airspace Control Surfaces (Info)**
- **How You Can Help (Info)**
- **The AF Commitment (Info)**





# AICUZ BACKGROUND

- **AICUZ is a Department of Defense (DoD) program initiated in 1973. The goals of the AICUZ Program are to:**
  - **Promote compatible uses of public and private lands in the vicinity of military airfields**
  - **Promote the public health, safety and welfare**
  - **Maintain future operational capability**



# AICUZ BACKGROUND

- An AICUZ study addresses 3 components:
  - Aircraft noise (noise contours)
  - Accident potential zones
  - Airspace control surfaces
- An AICUZ study provides a set of recommendations for compatible land use



# LANGLEY'S AICUZ PROCESS

- **AICUZ study kicked off in Nov 05:**
  - **Data collection team interviewed LAFB personnel (pilots, maintenance personnel, etc.)**
  - **Reviewed flight simulator data**
- **Air Combat Command validated data and approved the AICUZ for public release in Jul 07**
- **Municipalities briefed on AICUZ**
- **Public meeting - 28 Aug 07**



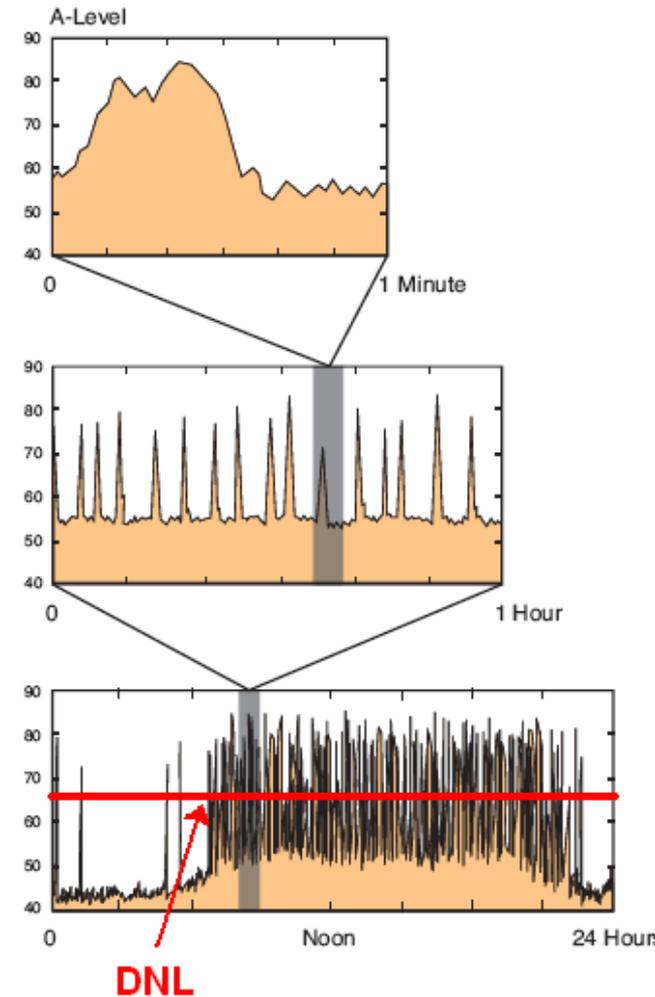
# NOISE CONTOURS

- **AICUZ Team gathered data on how LAFB operates**
  - **Aircraft Operational Data**
    - **Where (flight paths)**
    - **How (altitude, airspeed, power )**
    - **When (frequency and time of day)**
  - **Maintenance Data**
    - **Where (aircraft location)**
    - **When (frequency, duration and time of day)**
    - **How (power and duration)**
  - **Airfield Orientation**
  - **Atmosphere (temperature/humidity)**



# NOISE CONTOURS

- Operational data is loaded into the NOISEMAP software program
  - Generates a series of noise contours expressed in Average Day Night Sound Levels (DNL)
  - Noise contours represent a noise level average over 24 hours (10 dB penalty 10 pm to 7 am), not what you hear during a single noise event
  - Accepted methodology approved by the EPA; used since 1974



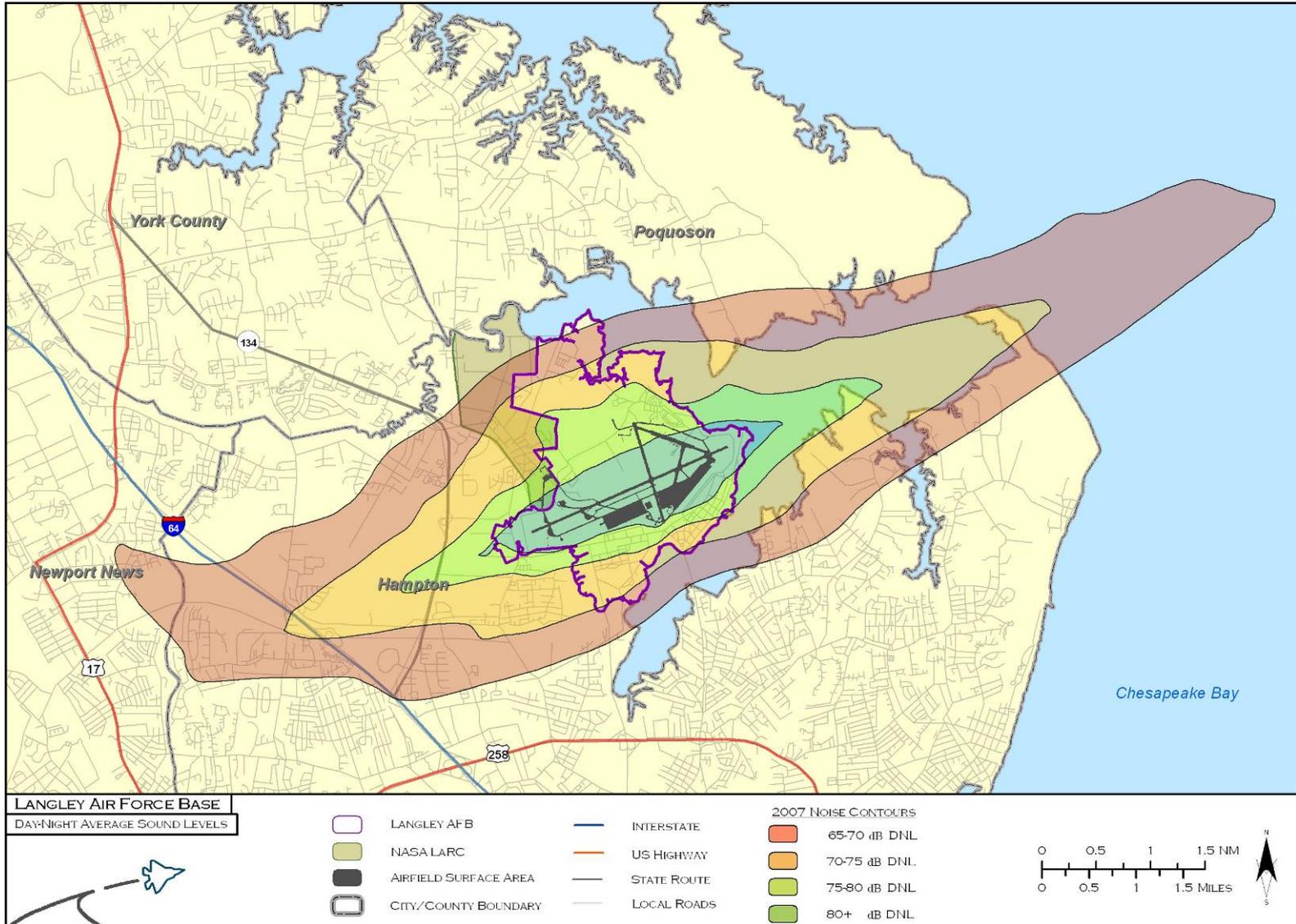


# NOISE CONTOURS

- **The AF makes recommendations for compatible land uses within those areas exposed to high levels of noise**
- **Residential land use is not recommended in areas with a 75+dB DNL average, or in areas with a 65 to 75 dB DNL average without noise attenuation**
- **Other noise sensitive uses are not recommended in high noise areas (i.e. schools, hospitals)**



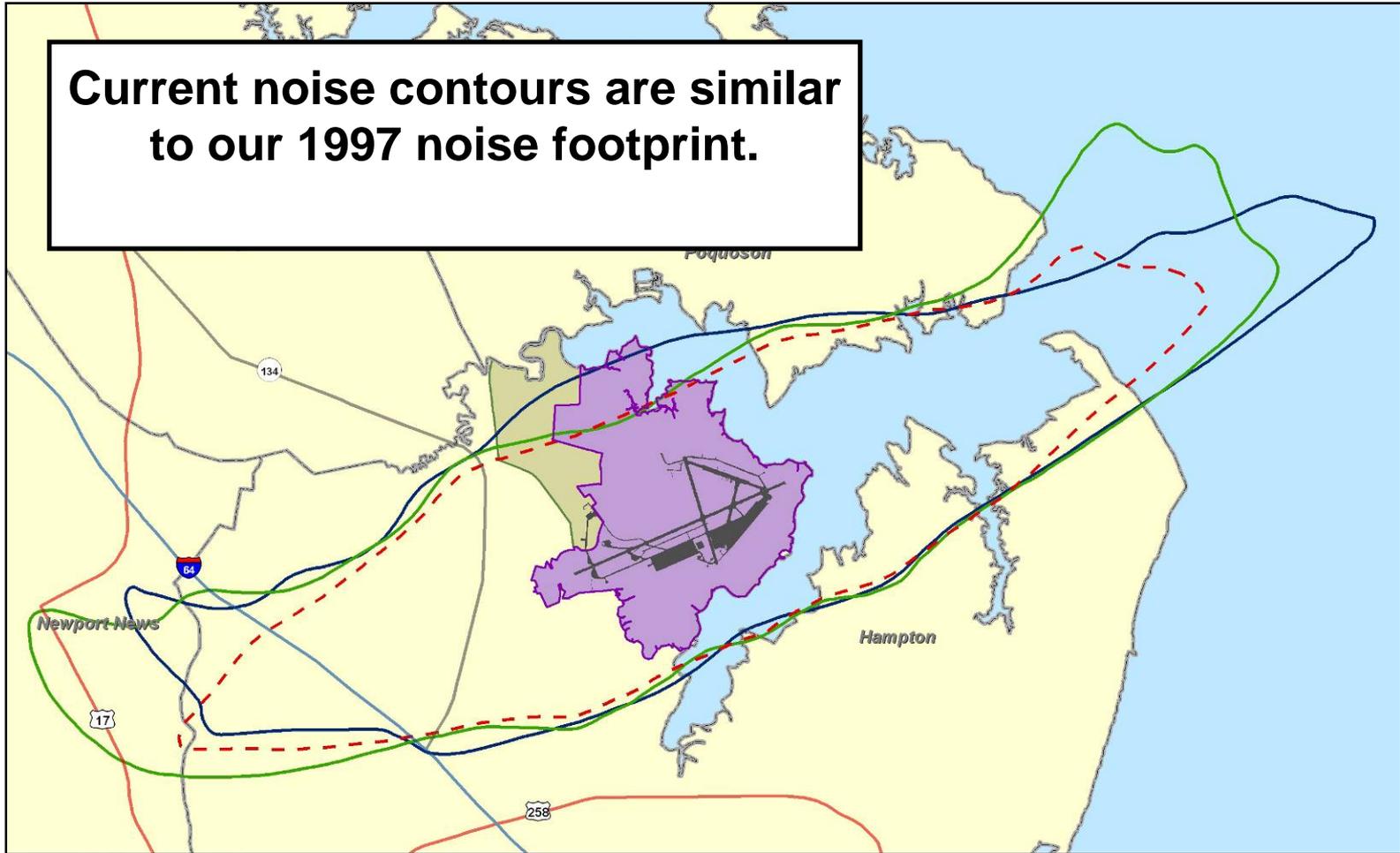
# NOISE CONTOURS





# NOISE CONTOURS

Current noise contours are similar to our 1997 noise footprint.

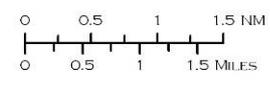


**LANGLEY AIR FORCE BASE**  
AVERAGE WEIGHTED SOUND LEVEL  
IN 1997, 2001, & 2007



- LANGLEY AFB
- NASA LARC
- AIRFIELD SURFACE AREA
- CITY/COUNTY BOUNDARY
- INTERSTATE
- US HIGHWAY
- STATE ROUTE

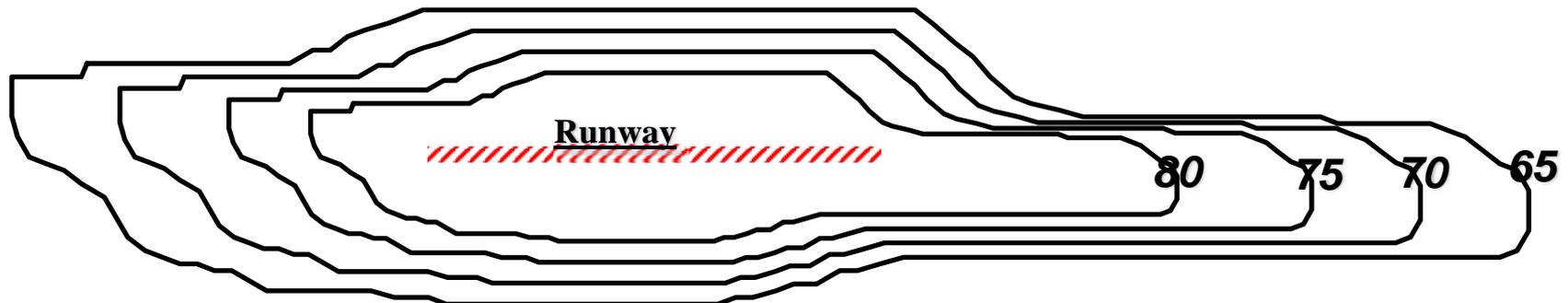
- 65 dB DNL 2007 NOISE CONTOURS
- 65 dB DNL 2001 PROJECTED (F-22 EIS) NOISE CONTOURS
- 65 dB DNL 1997 NOISE CONTOURS





# NOISE CONTOURS

- The cumulative noise contours are similar in size to the 1997 contours because:
  - 1 FW has fewer jets than in 1997
  - The 1 FW is flying fewer sorties than in 1997
  - The F-22 climbs higher quicker
- You can expect that an airfield's noise footprint will continue to change over time





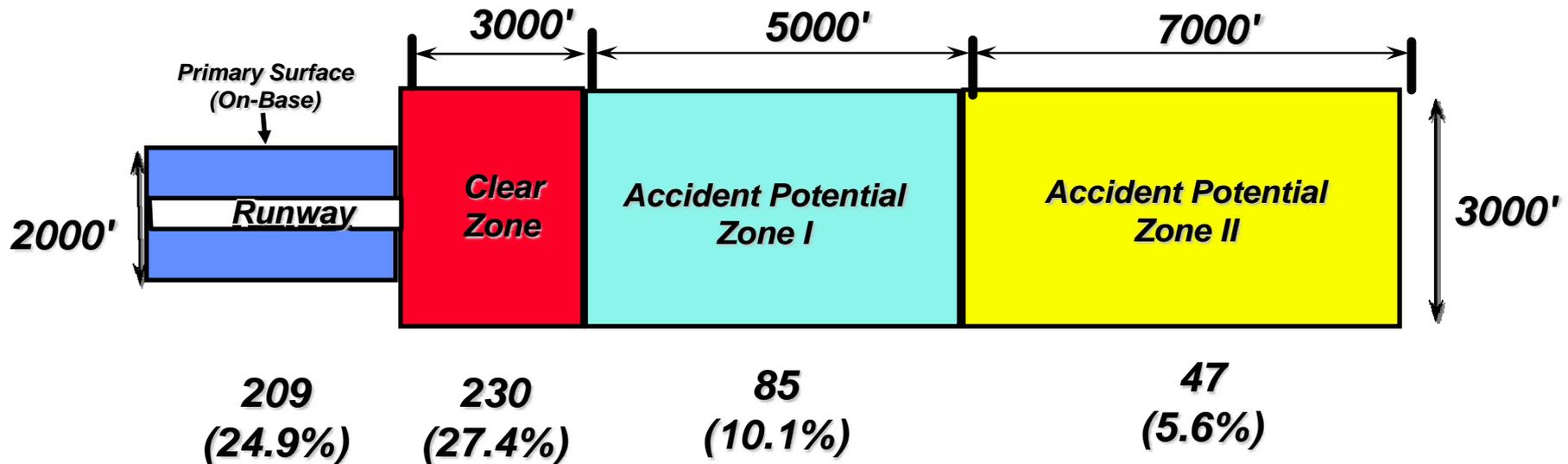
# ACCIDENT POTENTIAL

- **The AF makes recommendations for compatible land uses within those areas exposed to higher accident potential**
- **Nothing other than minimal agricultural use is recommended in the Clear Zone**
- **Housing and high-intensity uses such as churches, hospitals, schools and other gathering places are not recommended in the Accident Potential Areas**
- **Accidents are very rare**
  - **The 1 FW has flown 186,182.2 hours without an accident at Langley AFB**
  - **There's always a chance an accident could occur**



# ACCIDENT POTENTIAL

## *Air Force Accident Data (838 Accidents - 1968 - 1995)*

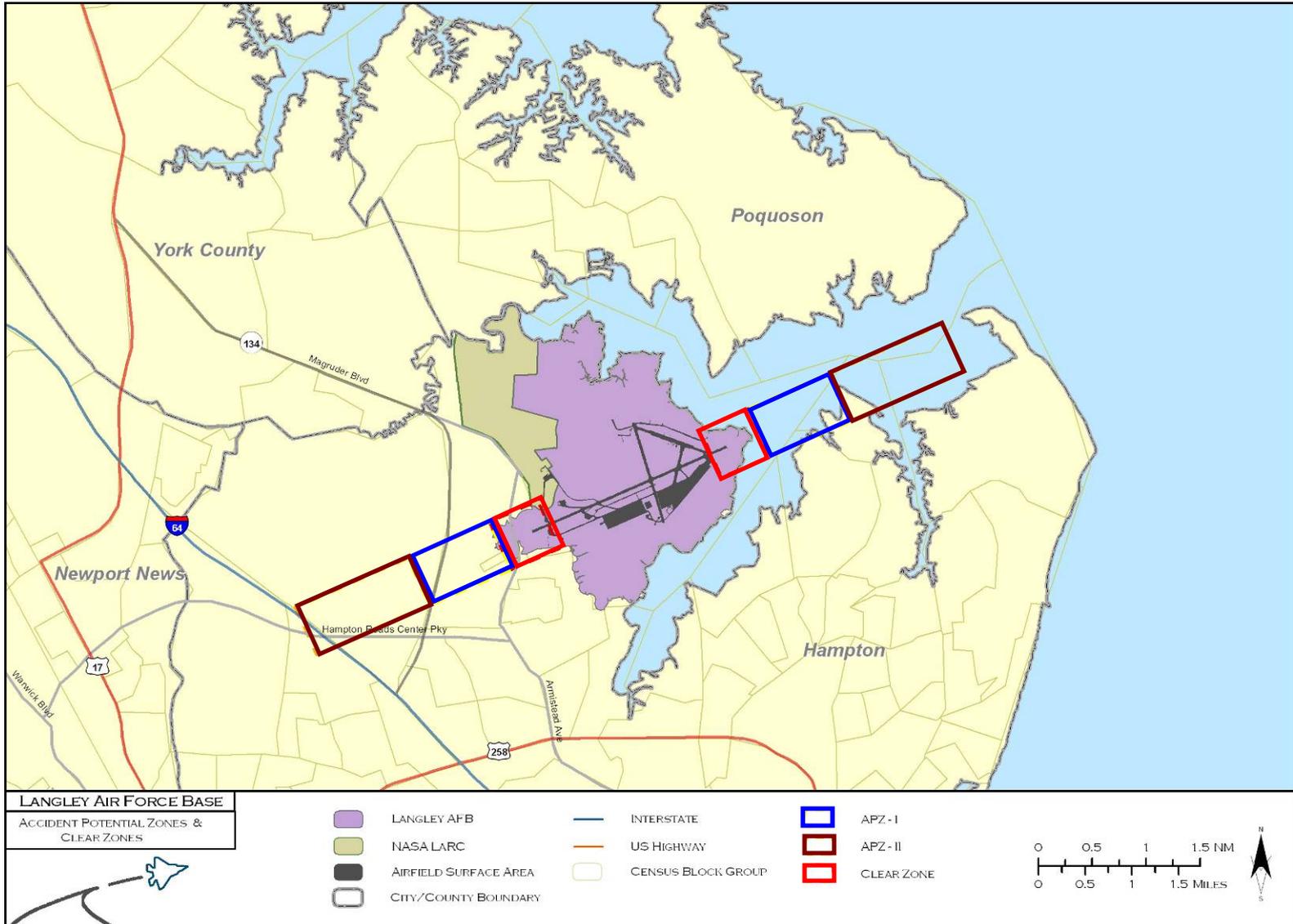


*Other Accidents Within 10 Nautical Miles  
267 (32.0%)*

Accident Potential Zones are determined by statistics gathered AF-wide that show where accidents are most likely to occur.



# ACCIDENT POTENTIAL



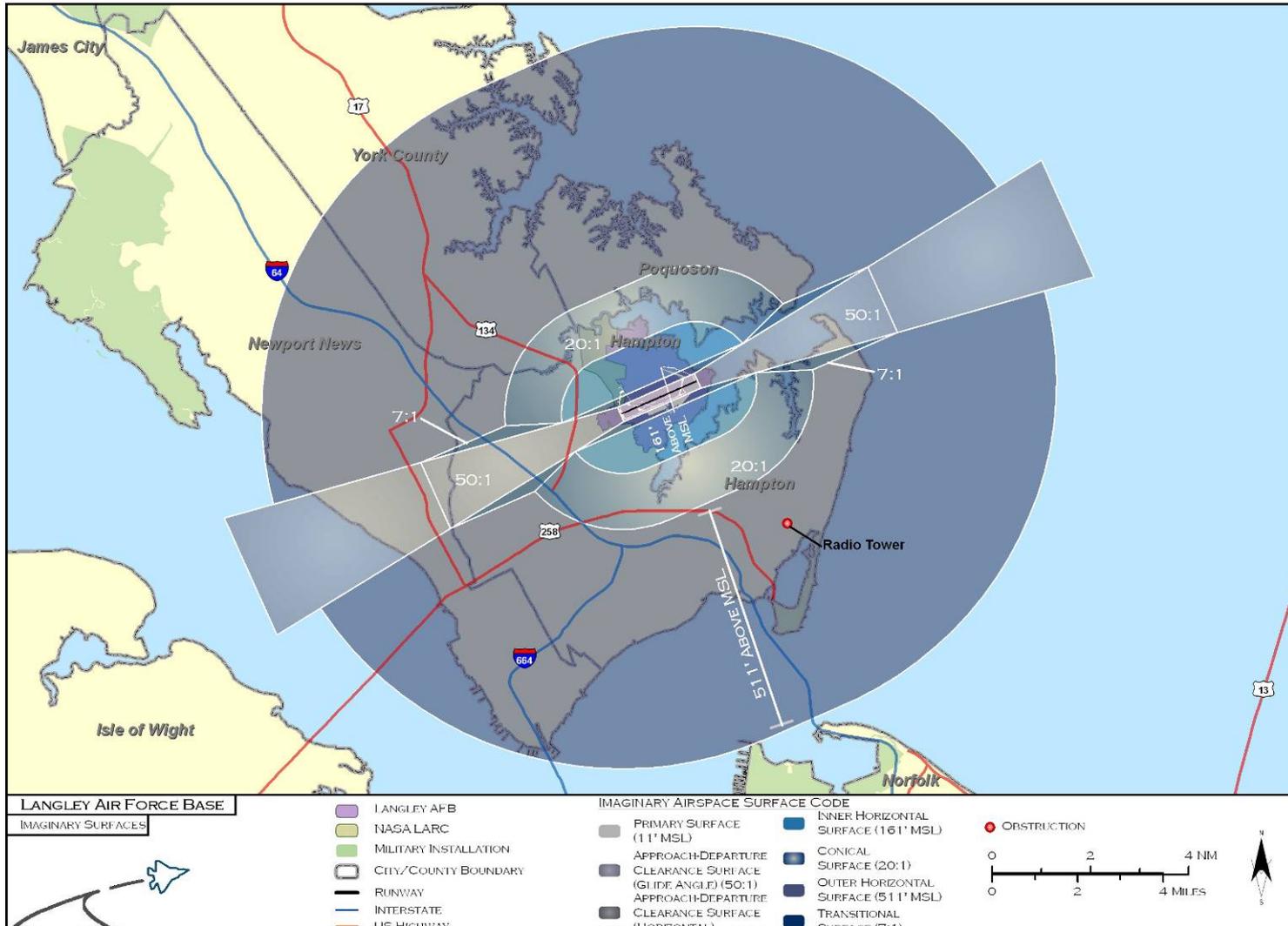


# AIRSPACE CONTROL SURFACES

- **Imaginary Airfield Surfaces designated by the Federal Aviation Administration surround Langley**
- **If tall obstructions are constructed in these areas, impacts to flying activity could occur**
- **Examples of obstructions include**
  - **Permanent obstructions (cell phone towers, water towers, radio towers, etc.)**
  - **Temporary obstructions (cranes)**



# AIRSPACE CONTROL SURFACES





# AIRSPACE CONTROL SURFACES

- **The AF recommends against construction of obstructions coming within 10' of control surfaces**
- **Their presence could compromise the ability of aircraft to land in adverse weather**
- **The AF also recommends against certain land uses near the airfield**
  - **Uses that release substances into the air**
  - **Uses which produce light or electrical emissions**
  - **Uses that attract birds**
- **The AF asks municipalities to contact LAFB when a use that could impact surfaces is planned (including temporary cranes)**



# PARTNERING

- **Recommend municipalities promote development that is compatible with AICUZ recommendations:**
  - **Avoid construction of housing and noise sensitive uses in high noise areas and require noise attenuation if it is built**
  - **Avoid population intensive uses and housing in Accident Potential Zones**
  - **Avoid construction of tall obstructions that violate airspace control surfaces**
  - **Avoid siting of land uses that could be hazardous to flight in the airfield vicinity**



# PARTNERING

- **Recommend municipalities continue to plan for the future of Langley AFB on the Peninsula**
  - **Request they participate in a Joint Land Use Study**
- **A JLUS is a process managed by the Office of Economic Adjustment**
  - **Helps AF bases and municipalities use land use planning tools to work together for mutual benefit**
- **As a citizen you can help**
  - **Express your support for the AF to your local city council person or board of supervisors rep**
  - **Ask your community to participate in the JLUS**



# **THE AIR FORCE COMMITMENT**

**In an effort to minimize the impact of its flying activities on the community, Langley AFB utilizes the following:**

- **Implementing Quiet Hours with primary operating hours between 6:00 a.m. and 10:30 p.m.**
- **Installing hush houses to suppress engine test noise**
- **Minimizing impacts by changing the preferred runway wind limitation from 5 to 10 knots to allow for more departures over water**
- **We continue to work with the FAA to allow jets to climb higher faster, thereby minimizing noise**



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**Thanks for your attention!**