

Joint Land Use Study – North Auxiliary Airfield



SHANNON BUSH

REGIONAL PLANNER

BCDCOG



Image credit: Instagram 'tony-del-rey'

Panelists



Hosted by:

- Shannon Bush, Project Manager
- Kathryn Basha, Planning Director

Joined by:

- Todd Martin, Acting Deputy Base Civil Engineer, JBC
- David Caimbeul, Community Planner, JBC



Joined by:

- Amanda Sievers, Planning Director

Agenda

- Joint Land Use Study (JLUS)
- Air Installation Compatible Use Zones (AICUZ)
- ‘AICUZ Footprint’ & Related Safety Measures in *Your Community*
- JLUS Addendum and Recommendations
- Open discussion / Q&A



Image credit: Post and Courier



Image credit: Wikipedia

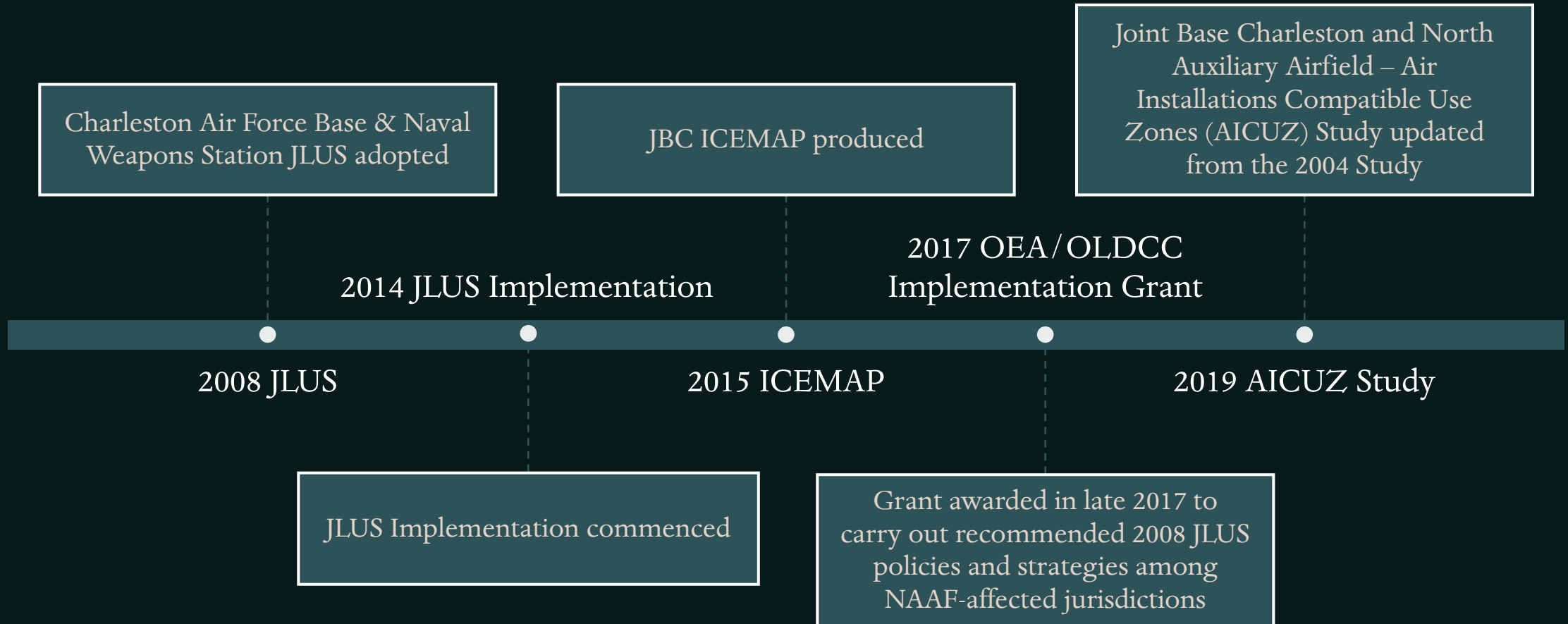


Image credit: Dept. of Defense



Image credit: Dept. of Defense

Timeline



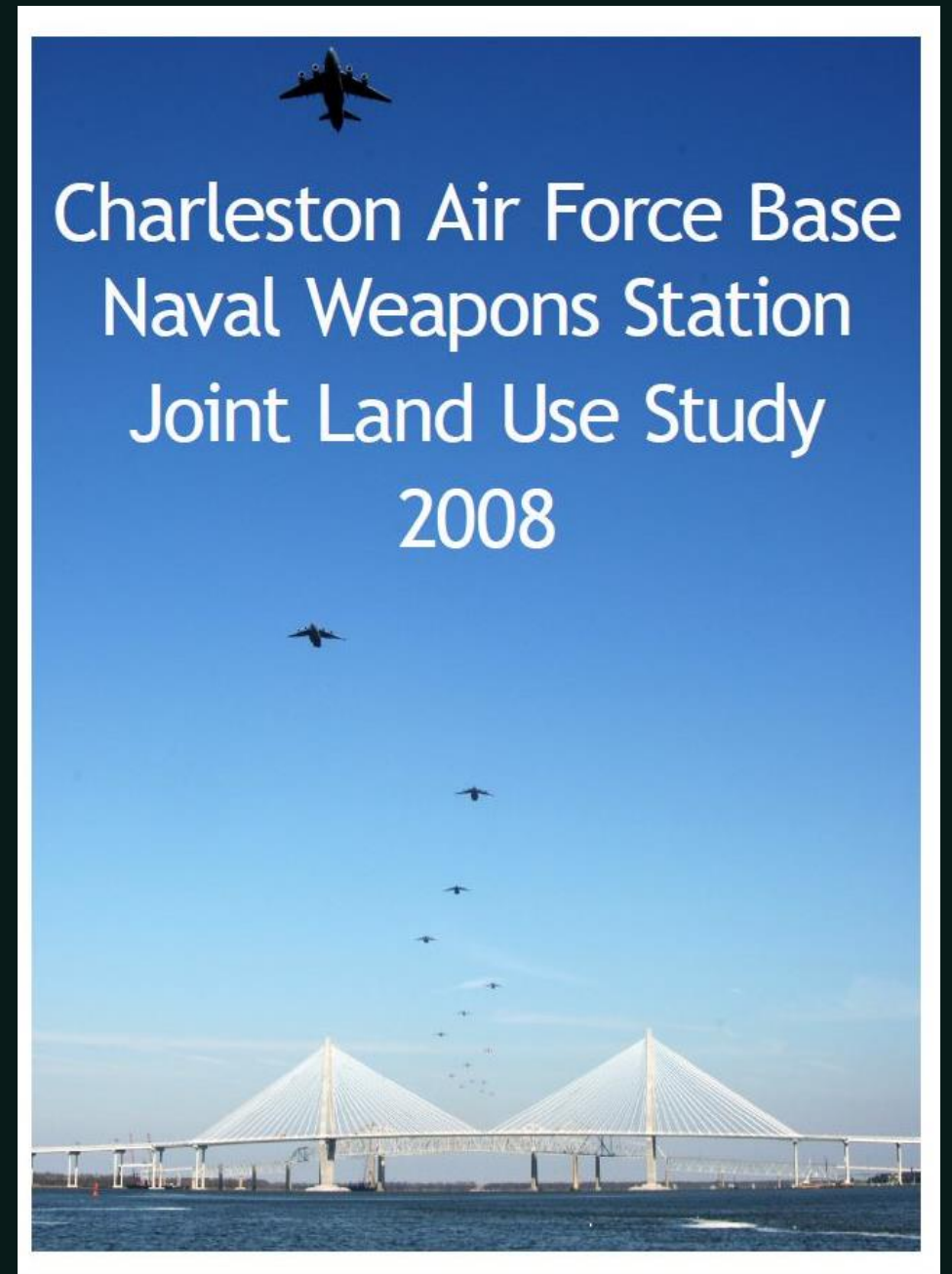
JLUS – PROGRAM OVERVIEW

- What is a *Joint Land Use Study* (JLUS)?
 - Purpose
 - Strategy / methodology
 - Outcomes
 - Recommendations & Implementation

2008 JLUS Recommendations

- Template Overlay Zoning District
- Assess feasibility of TDR Program
- Sound Attenuation and Noise Abatement Measures
- Updated Communications Plan

2021 JLUS Supplement for NAAF





2019 AICUZ Study ‘Takeaways’ for North Airfield (NAAF)

SCOPE

- Purpose is to identify any potential land use conflicts, existing now or future
- Provided detailed data about NAAF operations, including:
 - Aircraft operations, maintenance, and utilization
 - Land Use Compatibility Analysis
- Analyzed Orangeburg County only for NAAF
 - *Now broadened to capture 9 total jurisdictions*
 - *Counties: Aiken, Calhoun, Lexington and Orangeburg*
 - *Towns: Livingston, Neeses, North, Swansea and Woodford*

MEASURED IMPACTS

- Noise concerns
- Community & aircraft safety concerns

RECOMMENDATIONS & IMPLEMENTATION

- Strategies for existing land use incompatibilities and minimizing future incompatibilities
- Identified implementation “roles” (military, state, local, community)



2019 AICUZ Footprint Components

HAFZ Consultation
Zone

Imaginary Surfaces

Noise Zone and
Contours

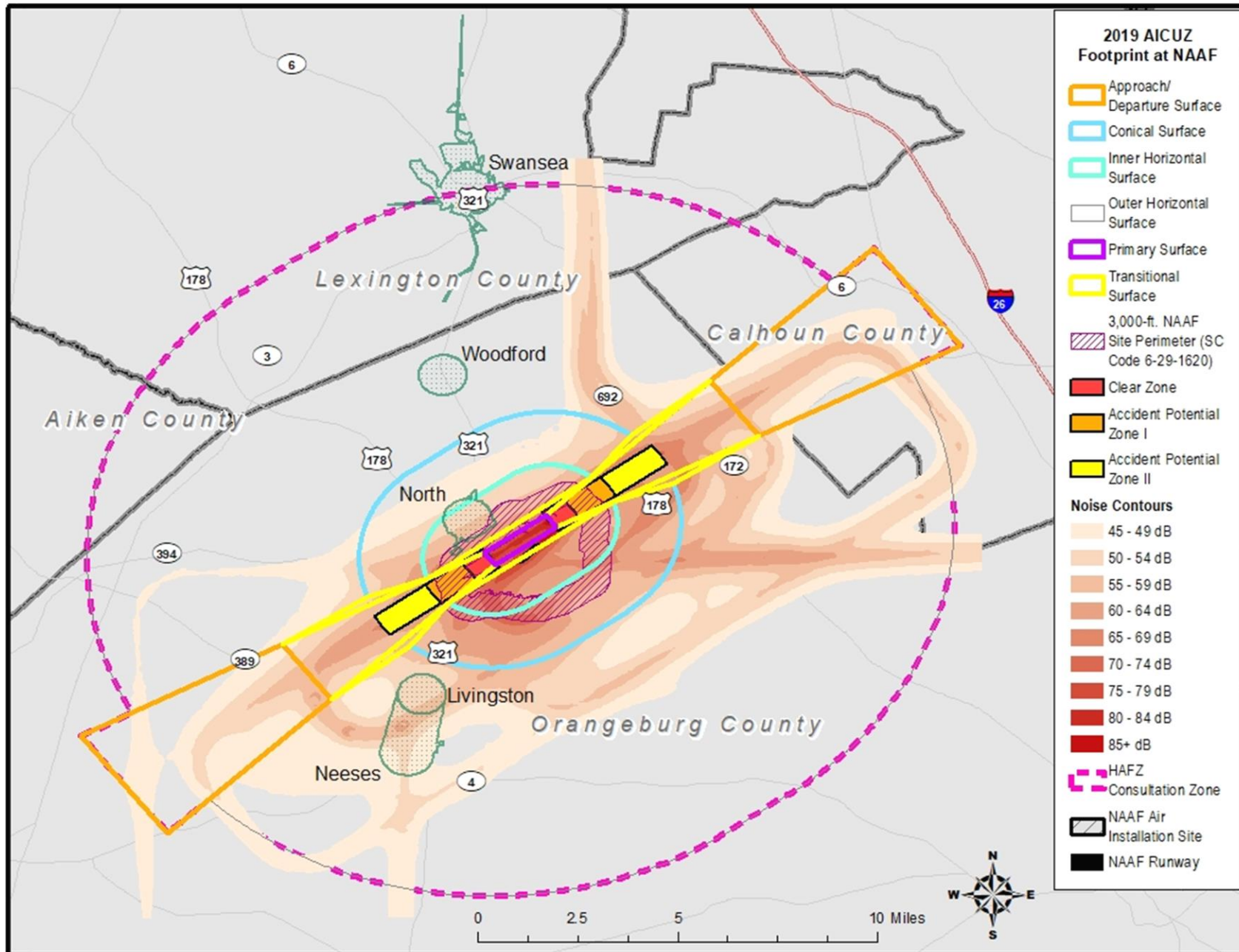
Accident Potential
Zones (APZs)

Clear Zones (CZs)

3,000-ft Air Installation
Consultation Perimeter
(S.C. Code § 6-29-1620)

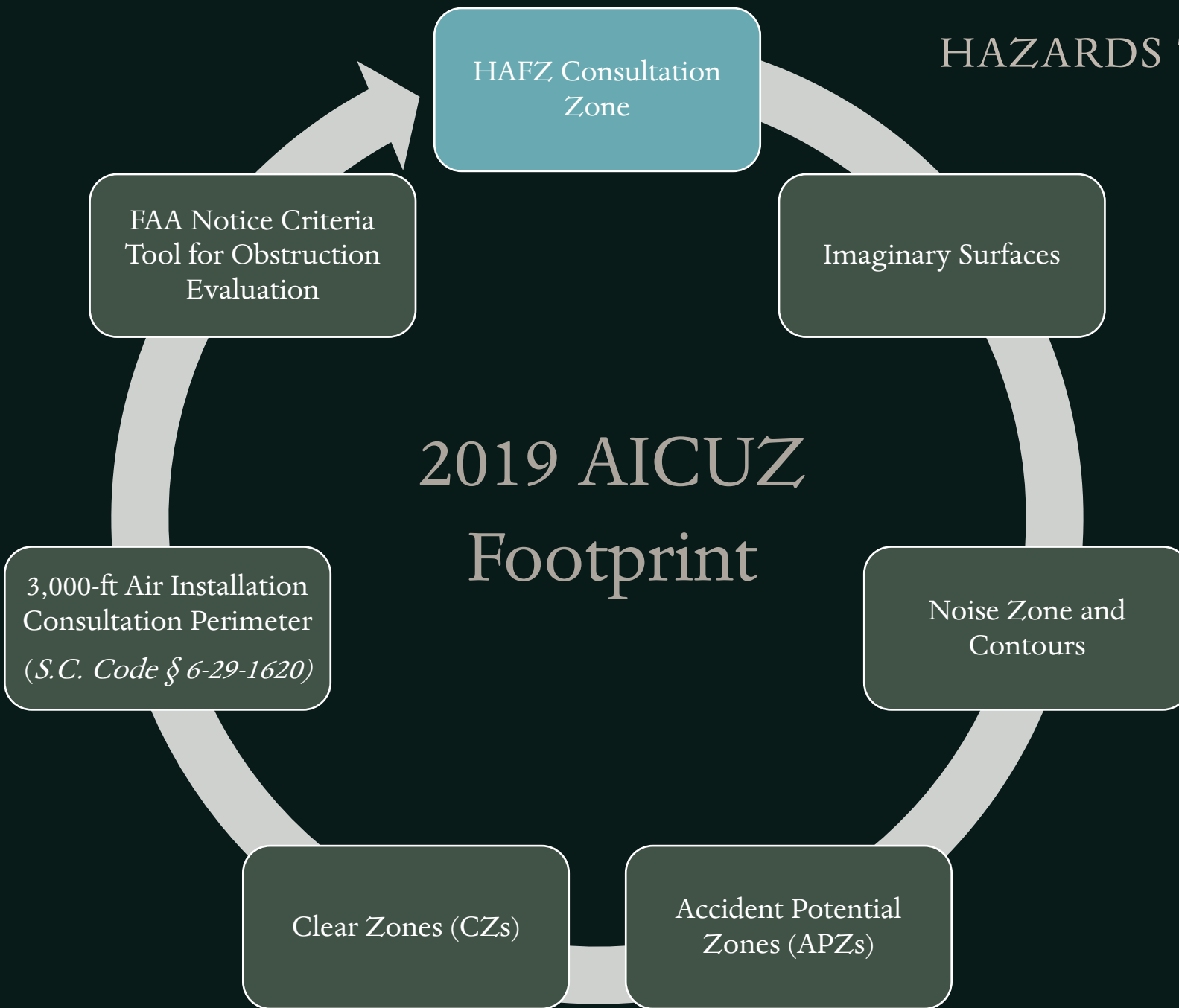
FAA Notice Criteria
Tool for Obstruction
Evaluation

(These 2 items were
more recently identified
by Air Force personnel,
and deemed pertinent to
the AICUZ discussion)



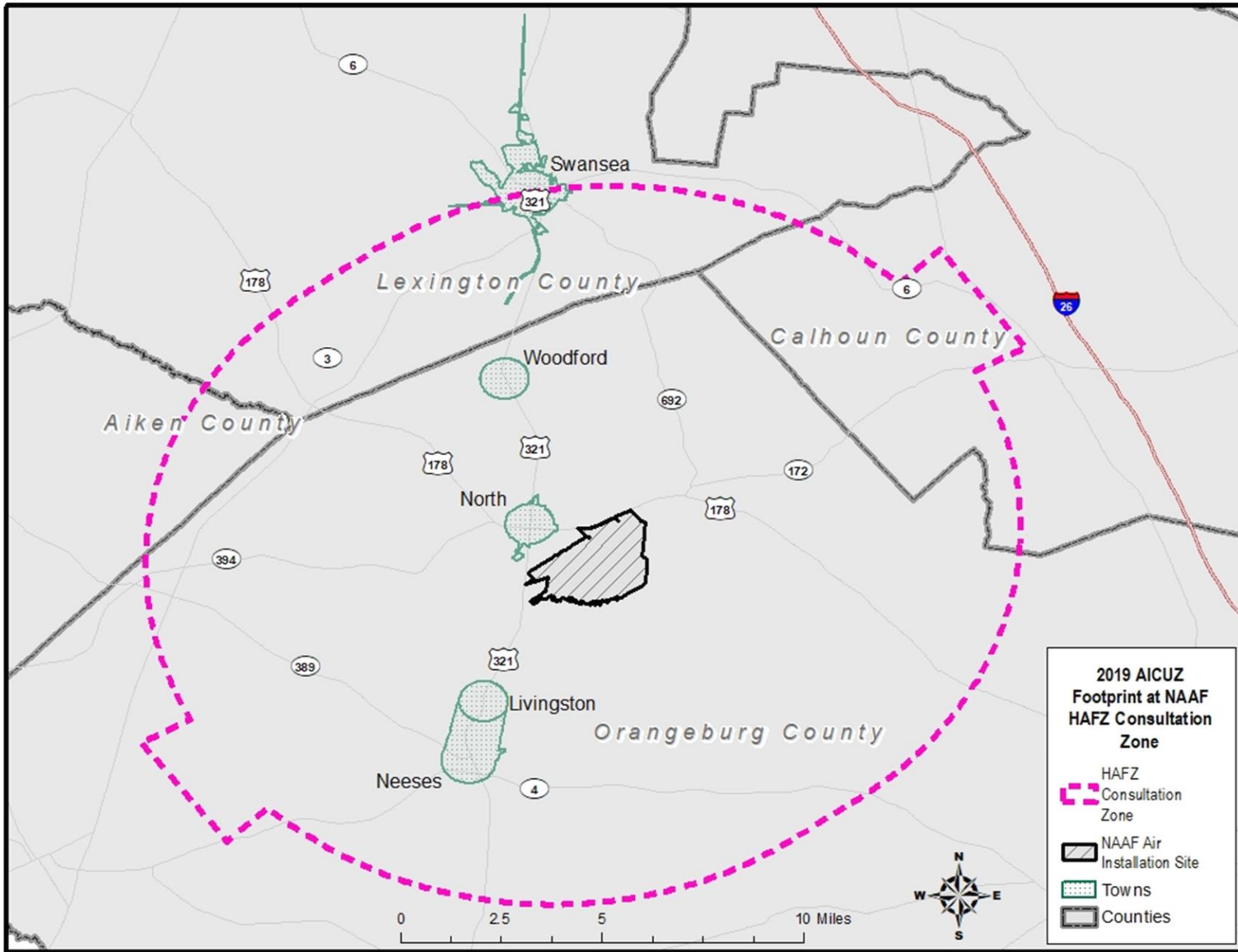
2019 AICUZ FOOTPRINT AT NAAF

*All Land Use
Planning Concerns*



HAZARDS TO AIRCRAFT FLIGHT ZONE (HAFZ)

- Certain land uses and activities pose potential hazards to flight operations.
- HAFZ is a consultation zone recommending that project applicants and local planning bodies consult with the Air Force to ensure the project is compatible with airfield operations.
- Compatibility considerations include:
 - Height
 - Visual Interference
 - Light Emissions
 - Bird/Wildlife Aircraft Strike Hazard (BASH)
 - Radio Frequency/Electromagnetic Interference



2019 AICUZ FOOTPRINT AT NAAF

HAFZ Consultation Zone

What does the 'HAFZ Consultation Zone' mean for You and Your Community?

Impacted Jurisdictions:

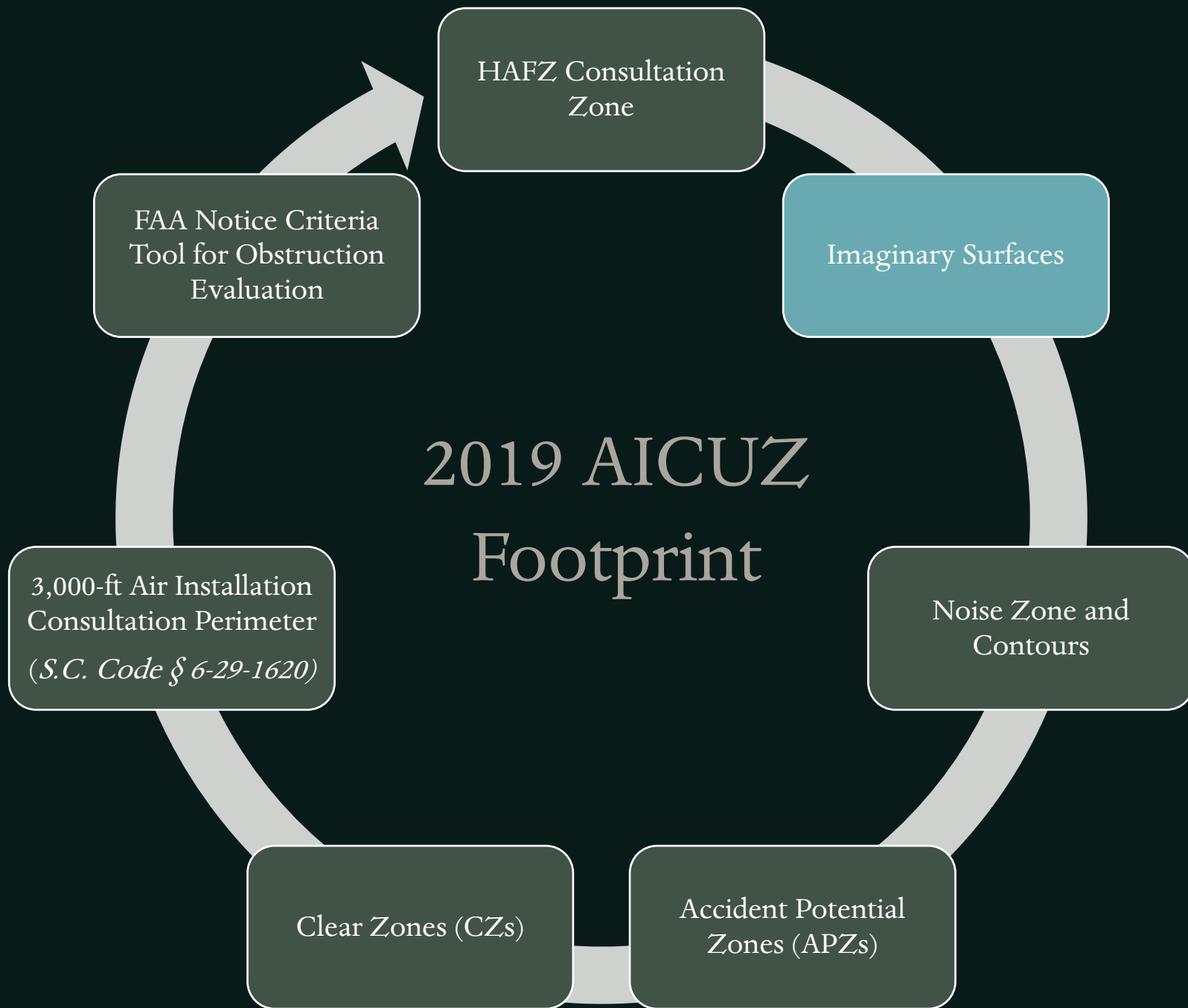
- Portions of: Aiken, Calhoun, Lexington and Orangeburg Counties
- Entire Towns: Livingston, Neeses, North, and Woodford
- Portion of Town of Swansea

• For Local Governments

- Prior to granting approvals or permits for projects in the HAFZ Consultation Zone, consult with Air Force officials about the proposed project

• For Community Members

- If you live in or own land within the HAFZ Consultation Zone, know that certain land uses may be restricted
- Consult early with your local planning and/or building codes department(s) about your proposed project



IMAGINARY SURFACES

- Complex series of imaginary planes and surfaces defining airspace around an airfield that must remain free of obstructions to ensure safety of local residents and airfield personnel
- Obstructions include:
 - Trees and natural terrain
 - Buildings, cell towers, utility poles, wind turbines
 - Other vertical obstructions to airspace navigation

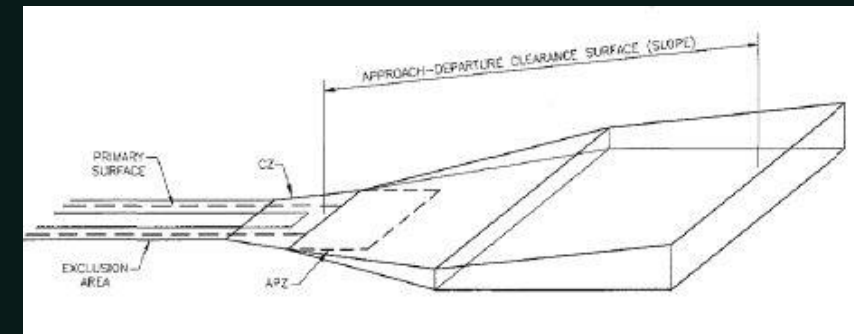
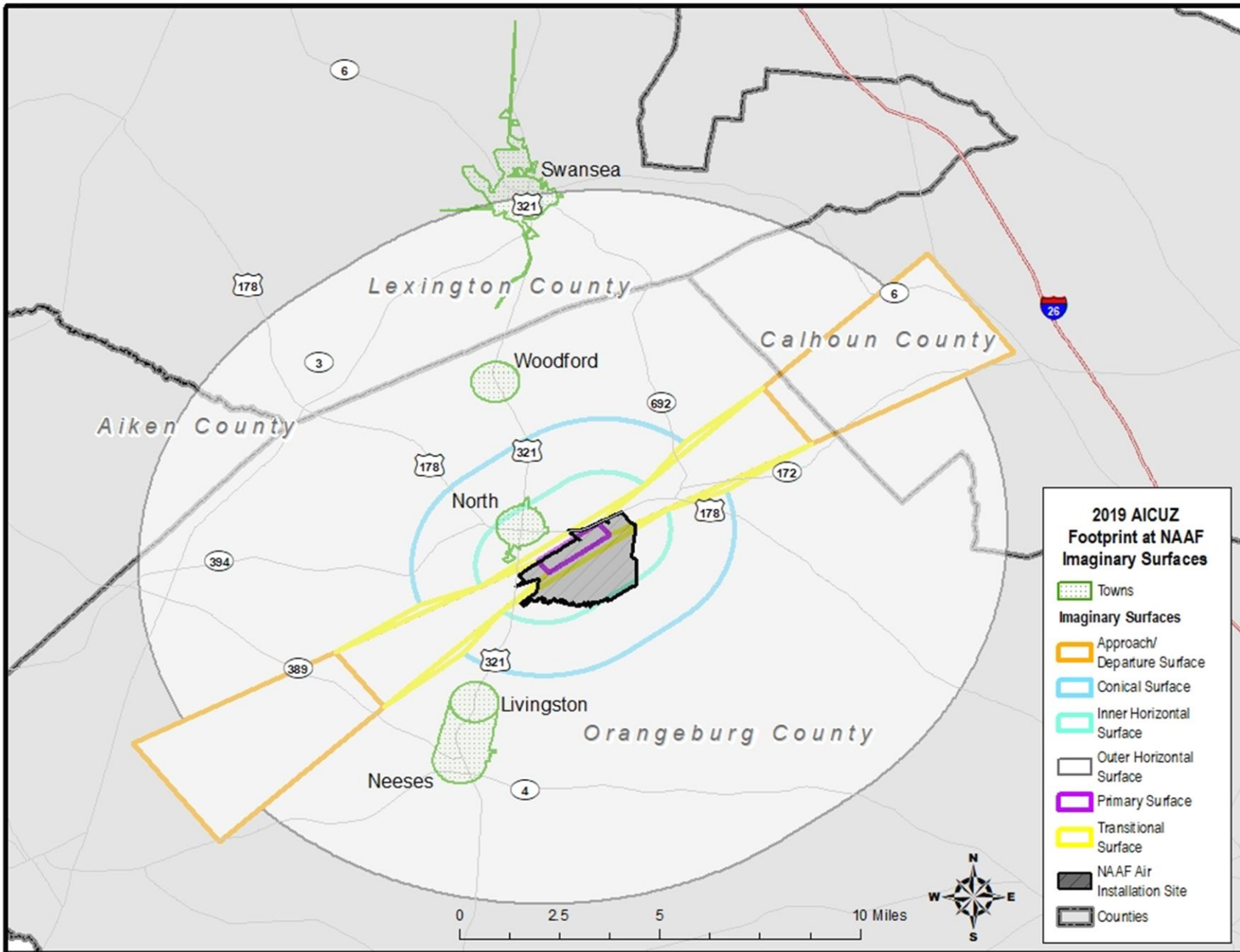


Image credit: U.S. Air Force

2019 AICUZ FOOTPRINT AT NAAF

Imaginary Surfaces



What do 'Imaginary Surfaces' mean for You and Your Community?

Impacted Jurisdictions:

- Portions of: Aiken, Calhoun, Lexington and Orangeburg Counties
- Entire Towns: Livingston, Neeses, North, and Woodford
- Portion of Town of Swansea

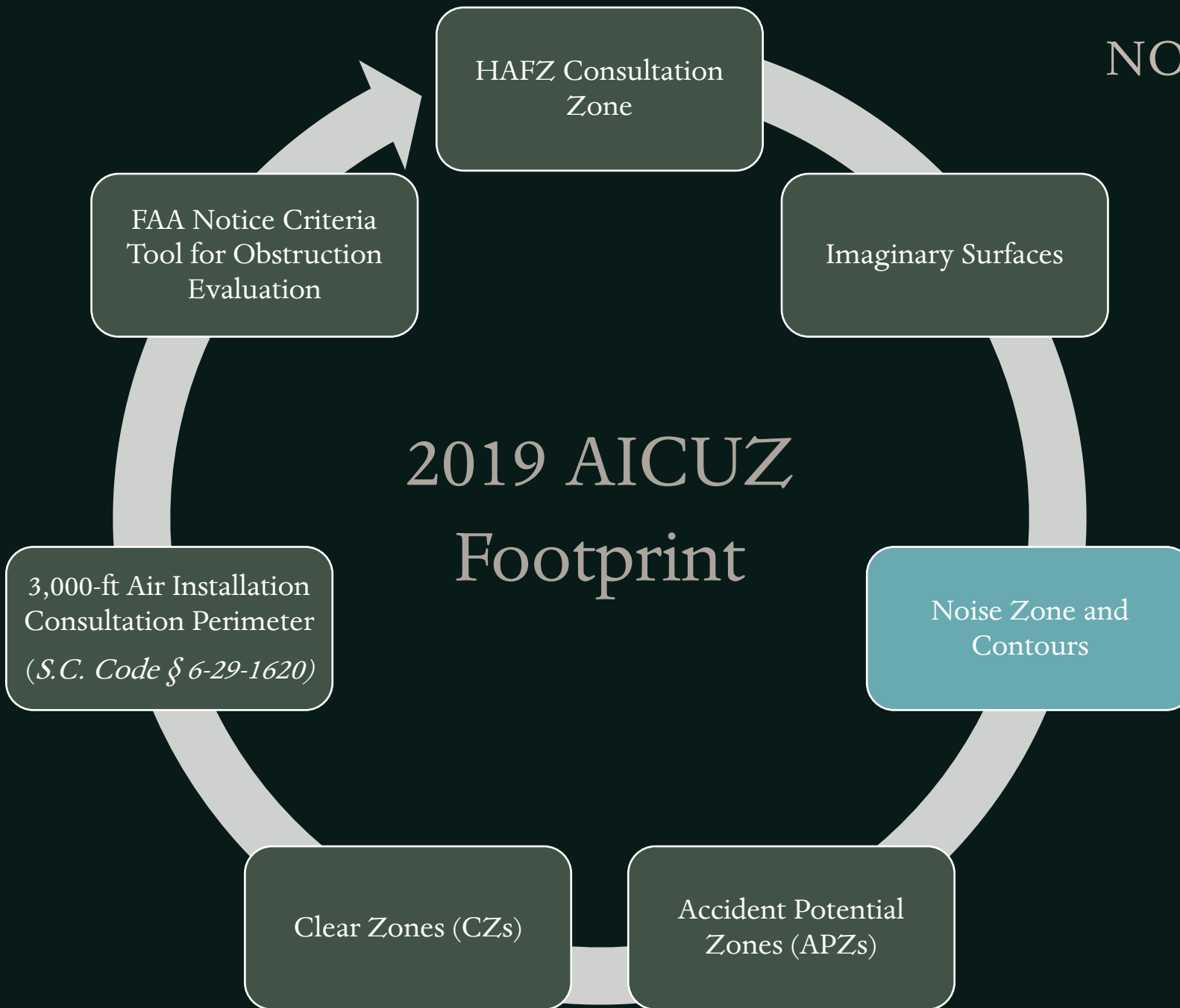
• For Local Governments

- Prior to granting approvals or permits for projects within mapped Imaginary Surfaces, consult with Air Force officials about the proposed project

• For Community Members

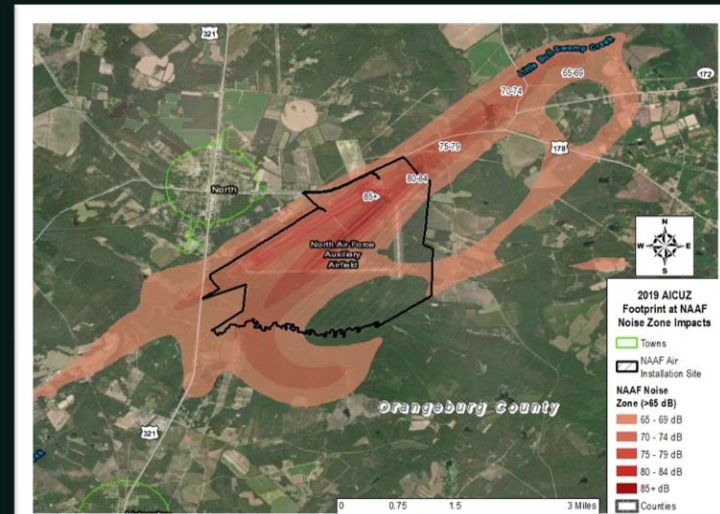
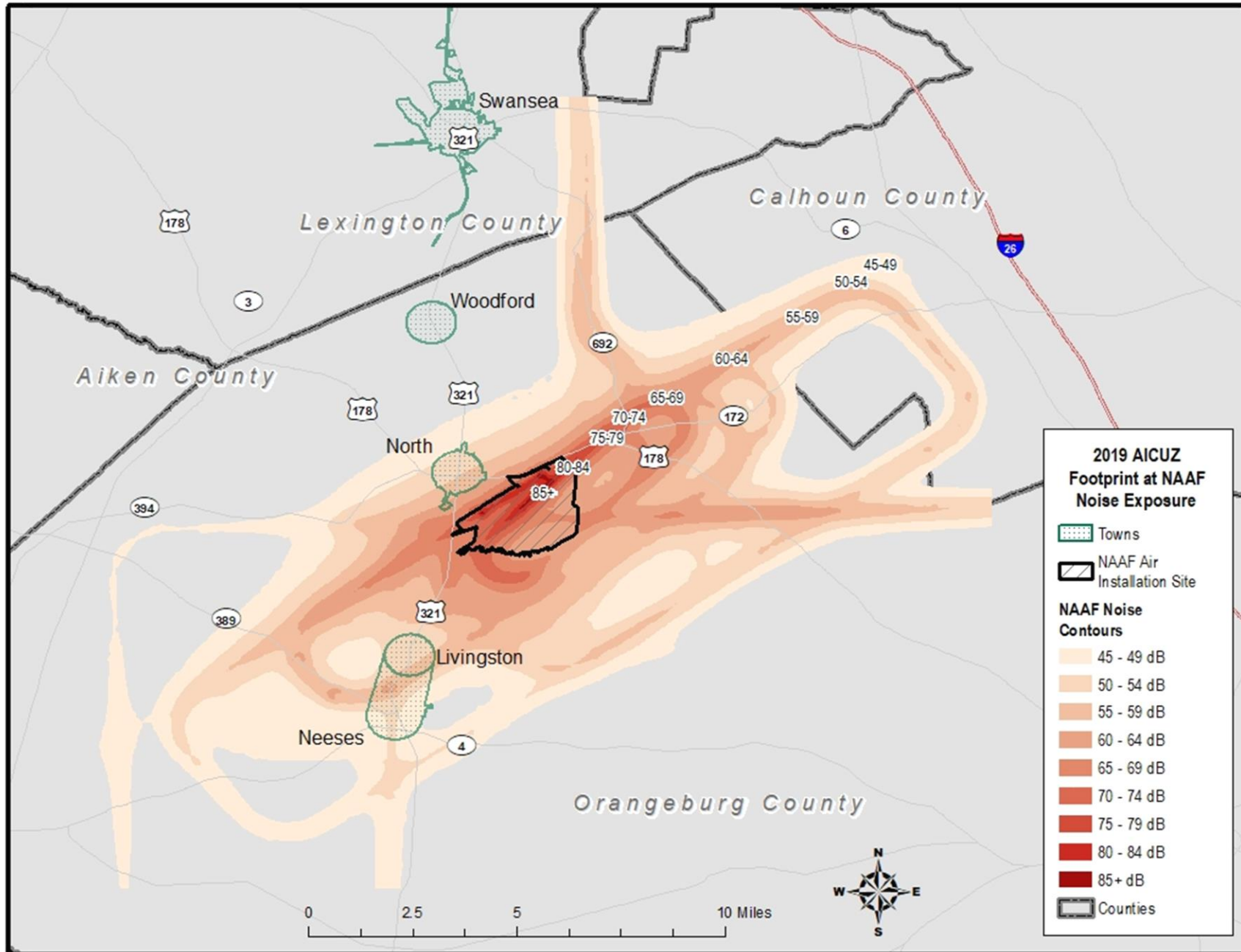
- If you live in or own land within the Imaginary Surfaces area, **know that projects should not create obstructions here**
- Consult early with your local planning and/or building codes department(s) about your proposed project

NOISE ZONE & CONTOURS



- Measure noise exposure from military aircraft operations
- Noise levels are mapped as ‘contours,’ just like topographic maps connecting points of equal value – average noise levels in decibels
- Noise contours are assessed alongside existing and/or future land use maps to determine compatibility of uses with average noise levels
- Noise levels exceeding $\pm 65-69$ dB considered ‘moderate to loud’ and may become a nuisance – known as installation’s “Noise Zone”

2019 AICUZ FOOTPRINT AT NAAF Noise Contours & Noise Zone



What do the 'Noise Zone and Noise Contours' mean for You and Your Community?

Impacted Jurisdictions:

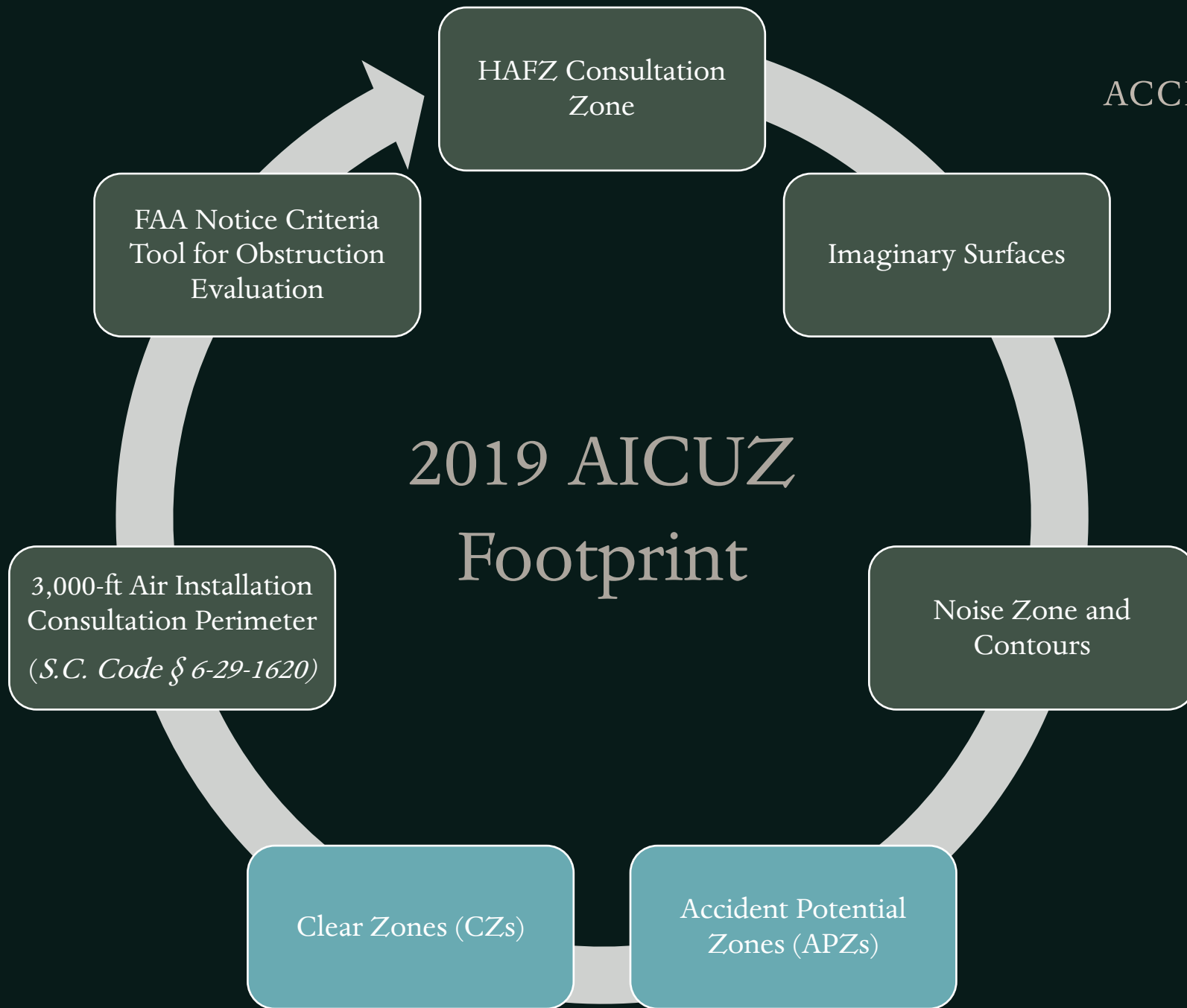
- Portions of: Calhoun, Lexington and Orangeburg Counties
- Entire Towns: Livingston, Neeses, and North

• For Local Governments

- Ensure Building Codes are up-to-date to minimize noise impacts in new construction

• For Community Members

- Adapt existing buildings with improved noise abatement materials and techniques
- If you live in or own land within the mapped noise contours or Noise Zone and experience adverse noise impacts, submit a complaint to your local government and Air Force officials (contact info provided at the end of this presentation)



CLEAR ZONES (CZs) & ACCIDENT POTENTIAL ZONES (APZs)

- Regulated 'zones' based on studies of historical accident and operations data around runways
- Defines three 'zones' around all air installations:
 - 'Clear Zone' - 3,000 SF area must remain completely clear of any development (*not even a fence!*)
 - 'APZ I' – Beyond CZ, 3,000-ft long, 5,000-ft wide, extended along runway
 - 'APZ II' – Beyond APZ I, 3,000-ft wide, 7,000-ft long, extended along runway

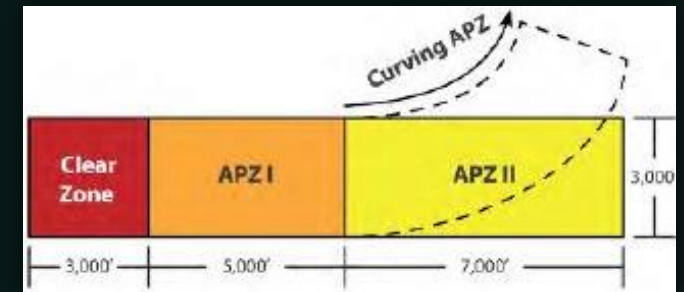
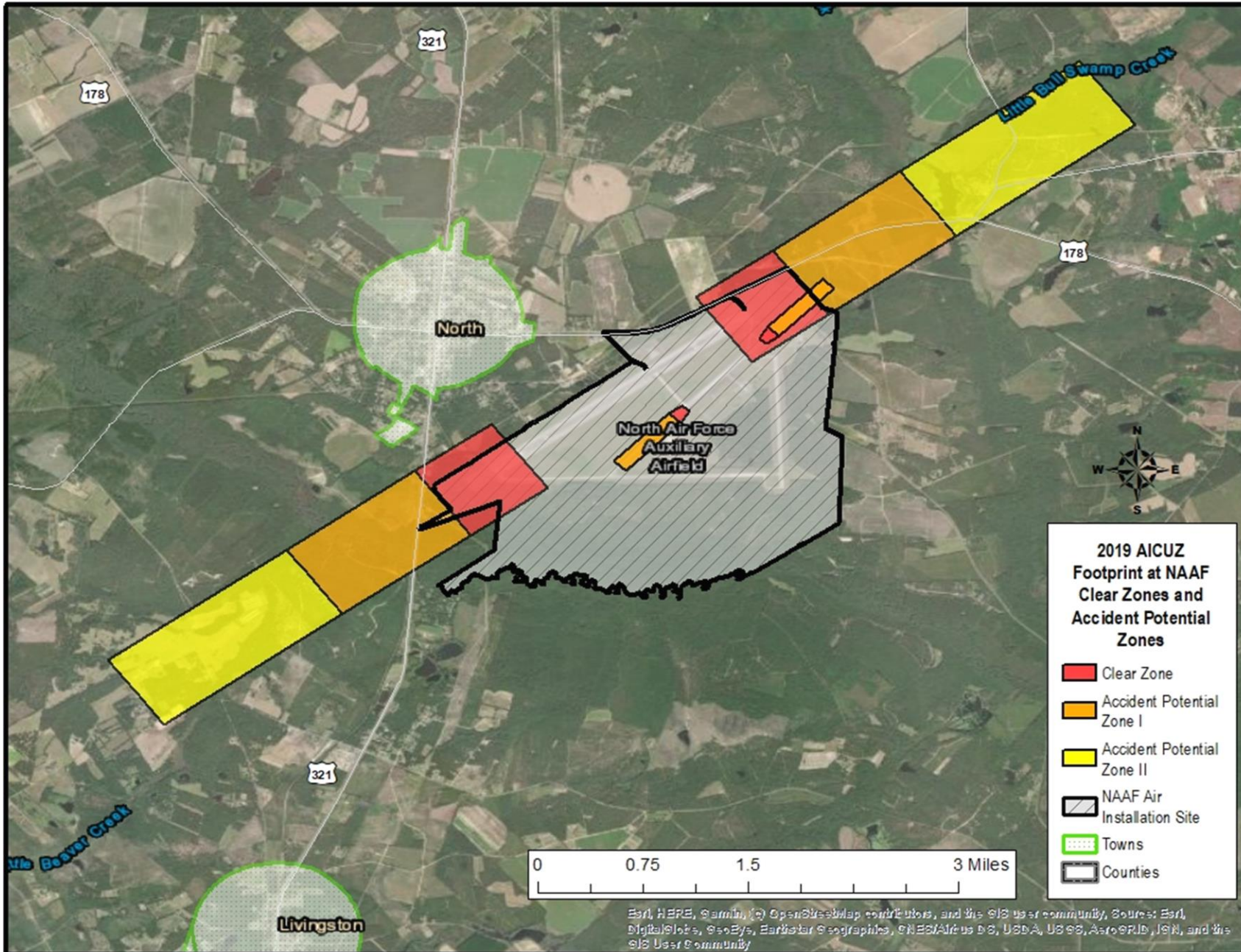


Image credit: U.S. Air Force



2019
 AICUZ FOOTPRINT
 AT NAAF
 Clear Zones and
 Accident Potential Zones

What do the 'CZs and APZs' mean for You and Your Community?

Impacted Jurisdictions:

- Portion of Orangeburg County
- *Near* the Town of North

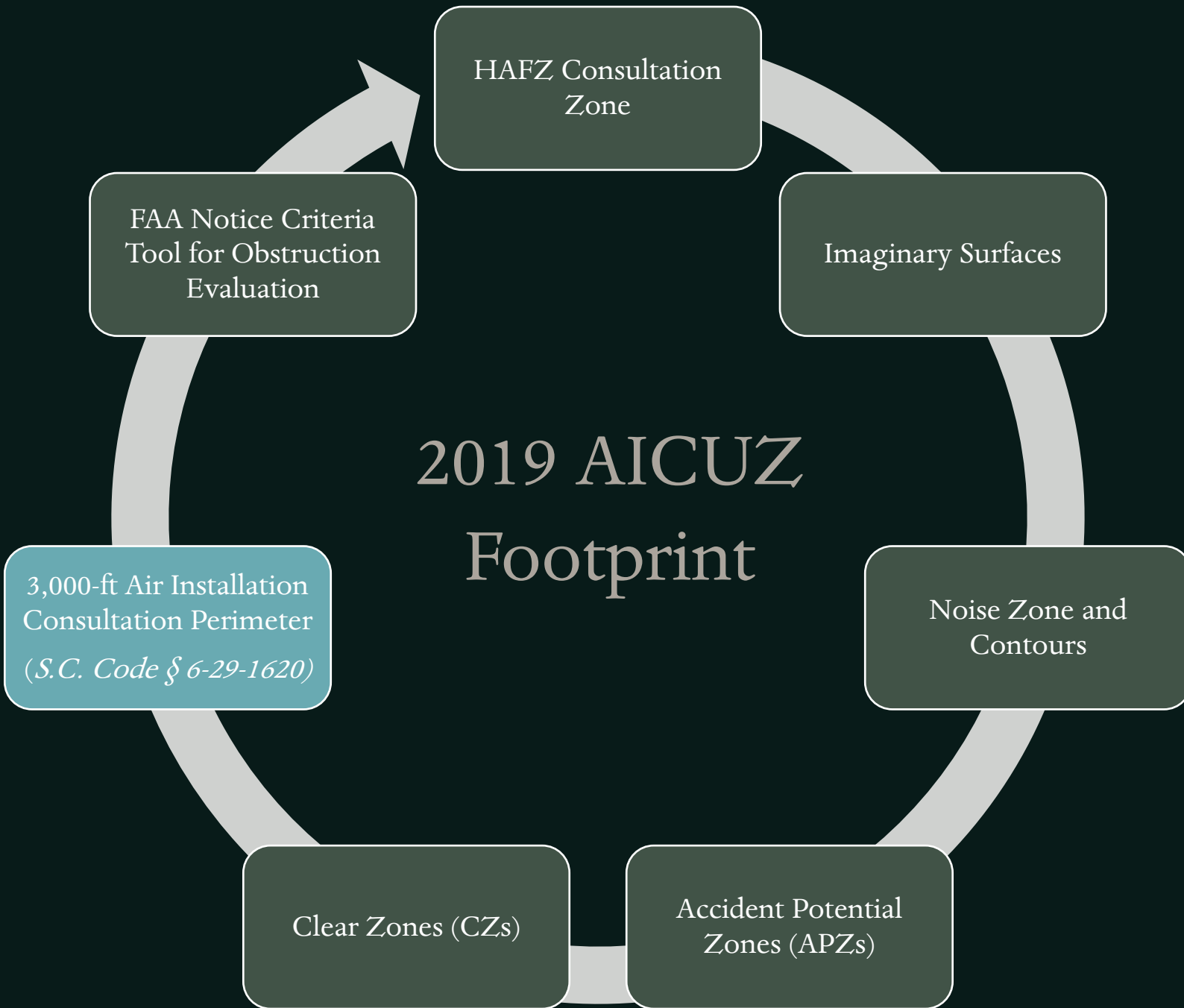
• For Local Governments

- Do not grant approvals to any new development in CZs
- Carefully review and consider proposed projects in APZs (only certain land uses should be allowed)
- Identify existing land uses in CZs and APZs and work with Air Force & BCDCOG to minimize risks and safety concerns

• For Community Members

- If you live in or own land within the CZs and APZs, know that development is very limited and restricted here for your and your family's safety

2019 AICUZ Footprint

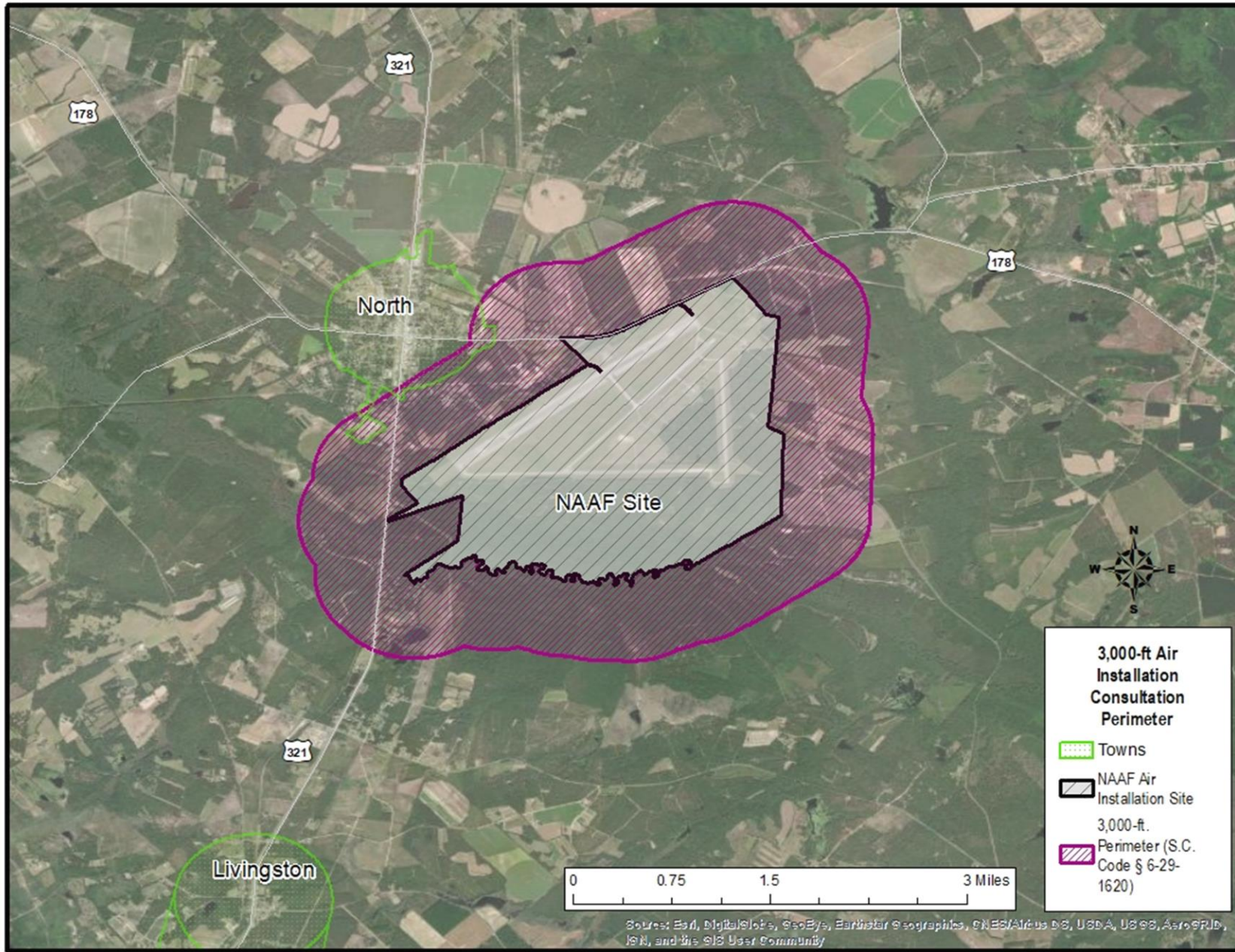


3,000-ft. AIR INSTALLATION CONSULTATION PERIMETER

- Known as the “Federal Defense Facilities Utilization Integrity Protection Act” (Title XI, Article 13)
- As SC grows, “there is significant potential for uncoordinated development in areas contiguous to federal military installations that can undermine the integrity and utility of land and airspace currently used for mission readiness and training.”

S.C. Code § 6-29-1630 states that ...

- **WHO**: Any local government with a Planning Department, Board of Zoning Appeals, Planning Commission, or an adopted Zoning Ordinance or Comprehensive Plan (or other similar entities), that are
 - 1.) *Located within a federal military installation overlay zone; OR*
 - 2.) *Within 3,000-feet of the air installation, shall:*
- **WHAT**: At least 30 days prior to any land use hearing, the municipality / planning authority / clerk must
 - 1.) Request a written recommendation from the military commander regarding the proposed use of the subject property; and,
 - 2.) The commander's written recommendation must become part of the public record for the project proposal.
- The municipality / planning authority / clerk has additional duties to carry out in response, enumerated at S.C. Code § 6-29-1630, (C) (1-6) and (D).



2019 AICUZ FOOTPRINT AT NAAF

*3,000-ft Perimeter
Around NAAF Site*

What does the '3,000-ft Air Installation Perimeter' mean for You and Your Community?

Impacted Jurisdictions:

- Portions of: Orangeburg County and Town of North

• For Local Governments

- At least 30 days prior to a land use hearing, the jurisdiction must contact Air Force officials and request written recommendation for any proposed project in the mapped area
- Carry out all other duties listed at S.C. Code § 6-29-1630, (C) (1-6) and (D)

• For Community Members

- If you live in or own land within this area, know that certain projects and land uses may be incompatible and not approvable by local government



FAA NOTICE CRITERIA TOOL FOR OBSTRUCTION EVALUATION

- In administering 14 CFR Part 77, the prime objectives of the FAA are to promote air safety and the efficient use of the navigable airspace.
- Requirements for filing with FAA for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. (See 14 CFR Part 77.9.)
- If an applicant/organization is planning to sponsor any construction or alterations which may affect navigable airspace, you must file a Notice of Proposed Construction or Alteration (FAA Form 7460-1) either electronically via the website (<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>) or manually with the FAA.



The system will be going offline at 7pm ET on Thursday, Sept 30, 2021 for scheduled upgrades (approximately 3 hours). We apologize for any inconvenience.

<< OE/AAA

- Obstruction Evaluation Version 2021-JUL-4
- Home
- FAA OE/AAA Offices
- View Determined Cases
- View Interim Cases
- View Proposed Cases
- View Supplemental Notices (Form 7460-2)
- View Circularized Cases
- Search Archives
- Download Archives
- Download Correspondence
- Circle Search for Cases
- Circle Search for Airports
- General FAQs
- Marking/Lighting FAQs
- Wind Turbine FAQs
- Discretionary Review FAQs
- Notice Criteria Tool
- DoD Preliminary Screening Tool
- Wind Turbine Build Out
- Distance Calculation Tool
- OE/AAA Account
- Login
- New User Registration
- Instructions

Notice Criteria Tool

faa.gov Tools: [Print this page](#)

Notice Criteria Tool - Desk Reference Guide V_2018.2.0

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference [CFR Title 14 Part 77.9](#).

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the [FAA Co-location Policy](#)
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- your structure will be on an airport or heliport
- filing has been requested by the FAA

If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the [Air Traffic Areas of Responsibility map](#) for Off Airport construction, or contact the [FAA Airports Region / District Office](#) for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	<input type="text"/> Deg <input type="text"/> M <input type="text"/> S <input type="button" value="N"/>
Longitude:	<input type="text"/> Deg <input type="text"/> M <input type="text"/> S <input type="button" value="W"/>
Horizontal Datum:	<input type="button" value="NAD83"/>
Site Elevation (SE):	<input type="text"/> (nearest foot)
Structure Height :	<input type="text"/> (nearest foot)
Traverseway:	<input type="button" value="No Traverseway"/> <small>(Additional height is added to certain structures under 77.9(c)) User can increase the default height adjustment for Traverseway, Private Roadway and Waterway</small>
Is structure on airport:	<input checked="" type="radio"/> No <input type="radio"/> Yes
<input type="button" value="Submit"/>	

FAA Notice Criteria Tool for Obstruction Evaluation

Project-dependent

What does the 'FAA Notice Criteria Tool' mean for You and Your Community?

Impacted Jurisdictions:

➤ *Project-dependent*, but likely similar to HAFZ & Imaginary Surfaces areas:

- Portions of: Aiken, Calhoun, Lexington and Orangeburg Counties
- Entire Towns: Livingston, Neeses, North, and Woodford
- Portion of Town of Swansea

• For Local Governments

➤ If an applicant is planning a project with construction or alterations that may affect navigable airspace, file a Notice of Proposed Construction or Alteration (FAA Form 7460-1)

• For Community Members

- If your project proposes construction or alteration that may affect navigable airspace, work with your local government to file Form 7460-1
- Know that FAA and Air Force reviews and project recommendations are separate

Jurisdictions Potentially Impacted by NAAF AICUZ Footprint

AICUZ FOOTPRINT COMPONENTS & RELATED LAND USE PLANNING ITEMS

Jurisdictions	HAFZ Consultation Zone	Imaginary Surfaces	Accident Potential Zones (APZs)	Clear Zones (CZs)	Noise Zone (dB Range)	Within 3,000-ft. NAAF Site boundary (<i>S.C. Code § 6-29-1620</i>)	FAA Notice Criteria Tool for Obstruction Evaluation
COUNTIES							
Aiken County	YES (far eastern extent)	YES	NO	NO	NO	NO	<i>Project-dependent</i>
Calhoun County	YES (far western extent)	YES (western extent in Approach/Departure IS)	NO	NO	YES (45 - 65± dB in AOI)	NO	<i>Project-dependent</i>
Lexington County	YES (far southern extent)	YES	NO	NO	YES (45 - 60± dB in AOI)	NO	<i>Project-dependent</i>
Orangeburg County	YES (northeastern extent)	YES (majority of IS area in northeastern extent)	YES (extends past NAAF site)	YES (extends past NAAF site)	YES (45 – 85+ dB in AOI)	YES - see 3,000-foot buffer on map	<i>Project-dependent</i>
TOWNS							
Livingston	YES (entire town)	YES	NO	NO	YES (50 - 65± dB in AOI)	NO	<i>Project-dependent</i>
Neeses	YES (entire town)	YES	NO	NO	YES (45 - 65± dB in AOI)	NO	<i>Project-dependent</i>
North	YES (entire town)	YES (entire town in IS area)	NO, ** BUT** Residential Priority Investment Area Abuts NAAF & CZs/APZs	NO, ** BUT** Residential Priority Investment Area Abuts NAAF & CZs/APZs	YES (45 - 65± dB in AOI)	YES - small area along southeast Town boundary - See 3,000-foot buffer on map	<i>Project-dependent</i>
Swansea	YES (southern extent)	YES	NO	NO	NO	NO	<i>Project-dependent</i>
Woodford	YES (entire town)	YES	NO	NO	NO	NO	<i>Project-dependent</i>

Recommendations for Local Governments Impacted by the 2019 AICUZ Footprint

ADOPT NEW 'OVERLAY ZONE'

- BCDCOG has prepared a JLUS Supplement containing recommendations and template language encouraging affected municipalities to adopt a new overlay zoning district corresponding with the AICUZ Footprint area for the NAAF.
- Specific language is provided for each AICUZ Footprint component (HAFZ, noise, CZs & APZs, etc.), geared toward impacts as relevant to each community. (See the Summary Table on previous slide.)

AMEND EXISTING OVERLAY ZONE

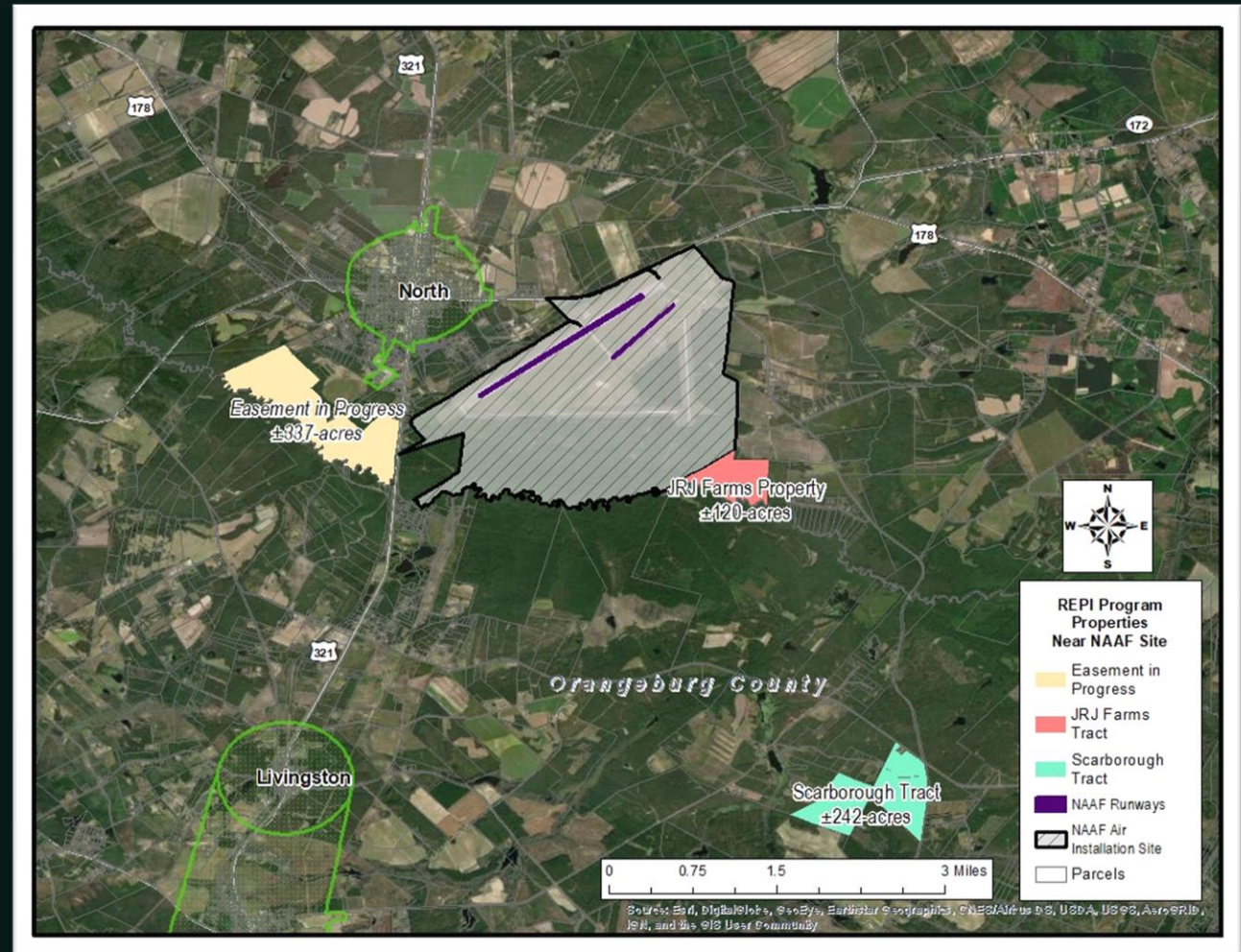
- Orangeburg County has an adopted Air Installation Overlay Zone, though some revisions are needed.
- For other jurisdictions with an existing NAAF Overlay Zone, the JLUS Supplement encourages municipalities to review it in contrast with suggested (template) text, the findings of the 2019 AICUZ Report, and the AICUZ Footprint area to ensure it is compatible and fully up-to-date.

Other Tools to Remedy Land Use Incompatibilities

REPI PROGRAM

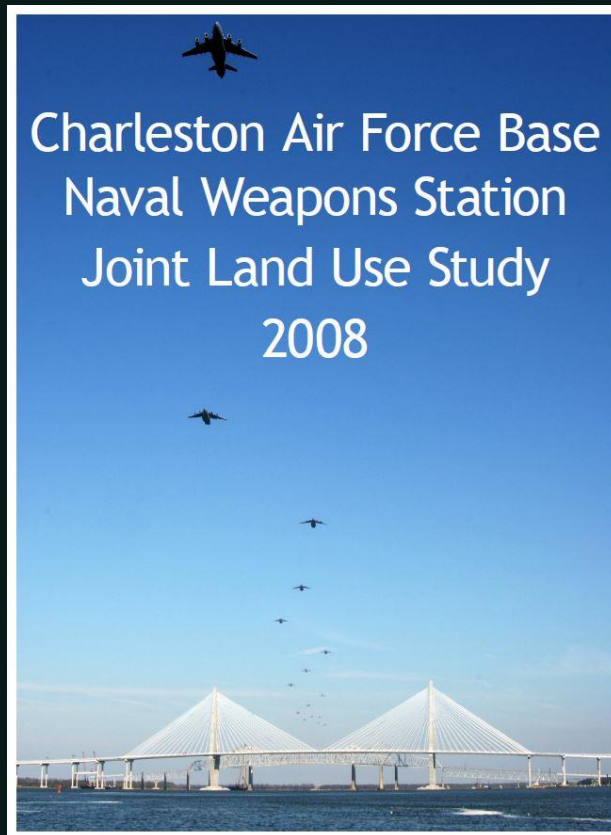
- Partnership between DoD and Ducks Unlimited to purchase strategic parcels or easements and impart restrictions that prevent development of uses incompatible with NAAF operations. Two purchases thus far:
 - Scarborough Tract (242.33 acres) - 084-00-02-009 – Recorded 12/3/19
 - JRJ Farms (120.8 acres) - 0086-00-01-011 – Recorded 6/29/21
 - A third easement is underway for parcel 0060-00-04-007

TDR PROGRAM



Hyperlinks to Documents and Related Resources

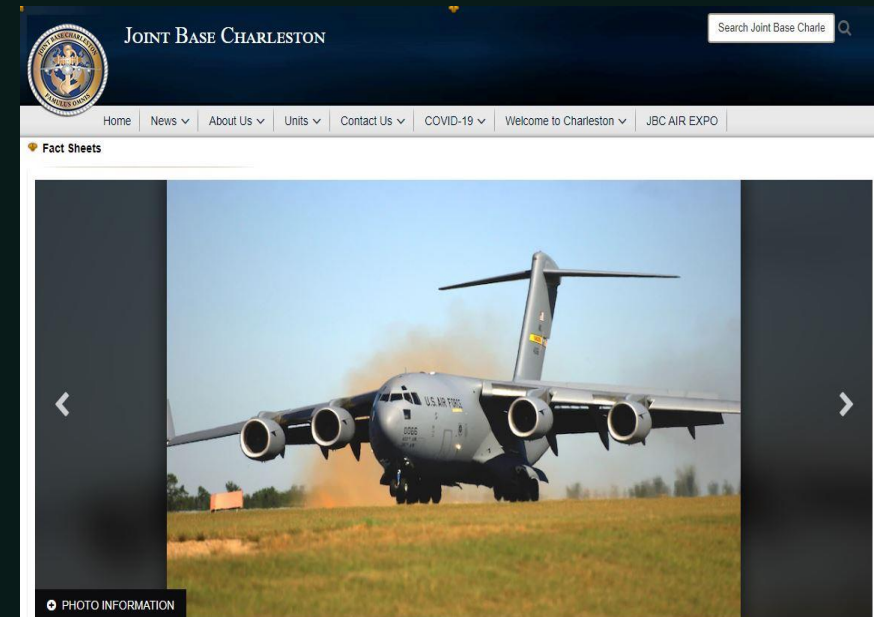
[BCDCOG'S JLUS PROJECT PAGE & 2008 JLUS DOC](#)



[2019 AICUZ STUDY](#)



[JBC-NAAF FACT SHEET](#)





What comments, questions or concerns do you have as local government leaders or community members?

Please submit on the [project webpage](#) in the “Comment or Message” field along with your name and email address.



Image credit: Joint Base Charleston



Image credit: ADC Engineering

Thank you

Shannon Bush, BCDCOG

Project Manager

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