Appendix A

Public Scoping Materials

Notice of Public Scoping Meetings

A notice of public scoping meetings was published in the *San Antonio Express-News* on March 4 and 14 and *Seguin Gazette* on March 5 and 15, 2019. The notice is as follows.

NOTICE OF INTENT AND NOTICE OF PUBLIC SCOPING MEETING
UNITED STATES AIR FORCE

The U.S. Air Force invites you to attend the Public Scoping Meeting for the proposed Joint Base San Antonio-Randolph T-X Recapitalization Environmental Impact Statement.

The U.S. Air Force (USAF) will host an open house public scoping meeting to discuss the proposal for Joint Base San Antonio (JBSA)-Randolph T-X Recapitalization, which includes replacing existing T-38C training aircraft with T-X training aircraft, and completing five military construction projects that would support the T-X program at JBSA-Randolph. The USAF also proposes to 15 minor projects to improve and construct additional support facilities at JBSA-Randolph.

JBSA-Randolph T-X Recapitalization Key Dates.

- February 2018: The Secretary of the Air Force issued a Strategic Basing Decision designating JBSA-Randolph as the preferred location for Advanced Pilot Training (T-X). Basing the T-X at JBSA-Randolph is an essential first step in establishing a T-X instructor pilot pipeline and sets the conditions to transition to T-X training at other pilot training bases.
- November 2018: The USAF selected the Boeing T-X aircraft to replace the T-38C.
- Summer 2020: Military construction for T-X support facilities is proposed to start.
- November 2022: Anticipated initial delivery of the new T-X aircraft and the conversion to training with the T-X aircraft is proposed to start.

ENVIRONMENTAL IMPACT STATEMENT (EIS). Pursuant to the National Environmental Policy Act, the USAF is preparing an EIS, which will assess the potential environmental consequences of the proposed JBSA-Randolph T-X Recapitalization.

PUBLIC SCOPING MEETING. The public is encouraged to attend an "open house" scoping meeting to learn more about the proposal and assist the USAF in identifying issues to evaluate in the EIS. Two scoping meetings will be held, one in Universal City, TX, near JBSA-Randolph and the second meeting in Seguin, TX, in the vicinity of Seguin Auxiliary Airfield. The meetings will be arranged in a "come and go" format with no formal USAF presentation or opportunity for public testimony. Subject matter experts will be available to help members of the public understand the Proposed Action and to answer general questions. Written comments will be accepted at the meetings; your input is valuable and assists the USAF in making more informed decisions. **Please drop in anytime between 5 p.m. and 8 p.m. on March 19, 2019 (CST) at the Olympia Hills Golf & Event Center, 12900 Mt. Olympus, Universal City, TX; or, between 5 p.m. and 8 p.m. on March 20, 2019 at Midway Hall, 728 Midway, Seguin, TX.** A Spanish-speaking interpreter will be available at the scoping meetings to assist with translation of meeting materials and written comments. ***Un intérprete de español está disponible para ayudar con la traducción de los comentarios al inglés.***

PUBLIC COMMENT. The USAF welcomes comments, suggestions, and relevant information on the proposal. Please submit comments in English at the public scoping meeting, by visiting www.TXRecapitalizationEIS.com or contacting Mr. Christopher Moore at the address below:

Mr. Christopher Moore, AFCEC/CZN
Attn: T-X Recapitalization EIS
2261 Hughes Ave, Suite 155
JBSA Lackland, TX 78236-9853

The USAF also welcomes comments under Section 106 of the National Historic Preservation Act (36 Code of Federal Regulations Part 800) regarding the identification of or effects on historic properties. If you have comments or would like to become a consulting party in the Section 106 process, please visit the project website or contact Mr. Christopher Moore, AFCEC/CZN at the address above.

To ensure the USAF has sufficient time to consider public input in the Draft EIS and the Section 106 process, please submit comments by April 5, 2019.

www.TXRecapitalizationEIS.com

Public Scoping Distribution List

A public scoping letter and project fact sheet were mailed to the following parties during March 2019.

Federal Agencies and Officials

Region 6 Regional Administrator
U.S. Environmental Protection Agency,
Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202

Field Supervisor
U.S. Fish and Wildlife Service
10711 Burnet Road, Suite 200
Austin, TX 78758

Stephen Brooks
U.S. Army Corps of Engineers
Regulatory Branch, Permit Section
Attn: CESWF-PER-R
819 Taylor Street, Room 3A37
Fort Worth, TX 76102

The Honorable John Cornyn
United States Senate
517 Hart Senate Office Building
Washington, DC 20510

The Honorable Ted Cruz
United States Senate
404 Russell Senate Office Building
Washington, DC 20510

The Honorable Henry Cuellar
(Representative for Texas's 28th
Congressional District)
United States House of Representatives
2209 Rayburn House Office Building
Washington, DC 20515

The Honorable Chip Roy
(Representative for Texas's 21st
Congressional District)
United States House of Representatives
1319 Longworth House Office Building
Washington, DC 20515

The Honorable Lloyd Doggett
(Representative for Texas's 35th
Congressional District)
United States House of Representatives
2307 Rayburn House Office Building
Washington, DC 20515

The Honorable Vicente Gonzalez
(Representative for Texas's 15th
Congressional District)
United States House of Representatives
113 Cannon House Office Building
Washington, DC 20515

State Agencies and Officials

Toby Baker, Executive Director
Office of Permits and Registrations
Texas Commission on Environmental
Quality
MC 122, P.O. Box 13087
Austin, TX 78711-3087

Texas Parks and Wildlife Department
Wildlife Division: Wildlife Habitat
Assessment Program
4200 Smith School Road
Austin, TX 78744-3291

Michael Segner, CFM
NFIP State Coordinator
Texas Water Development Board
1700 Congress Avenue
Austin, TX 78701

NEPA Coordinator
Texas Commission on Environmental
Quality
P.O. Box 13087
Austin, TX 78711-3087

Mark Wolfe
State Historic Preservation Officer
Texas Historical Commission
1511 Colorado Street
Austin, TX 78701

The Honorable Greg Abbott
Governor of Texas
P.O. Box 12428
Austin, TX 78711

The Honorable Dan Patrick
Lieutenant Governor of Texas
P.O. Box 12068
Austin, TX 78711

The Honorable Roland Gutierrez
Representative of State of Texas, District 119
3319 Sidney Brooks
San Antonio, TX 78235-5136

The Honorable Barbara Gervin-Hawkins
Representative of State of Texas, District 120
403 South WW White Road, Suite 210
San Antonio, TX 78219-4203

Local Agencies and Officials

External Affairs and Communications
Alamo Area Council of Governments
8700 Tesoro Drive, Suite 160
San Antonio, TX 78217

John E. Cantu
Environmental Manager
City of San Antonio
Municipal Plaza Building
114 W. Commerce, 2nd Floor
P.O. Box 839966
San Antonio, TX 78283-3966

Robert Brach
Bexar County Floodplain Administrator and Development Services Manager
1948 Probandt St.
San Antonio, TX 78214

Patrice Melancon
Manager, Watershed Engineering Department
San Antonio River Authority
100 East Guenther Street
San Antonio, TX 78204

The Honorable Michael Carpenter
Mayor of City of Schertz
1400 Schertz Parkway
Schertz, TX 78154-1634

Brian James
(Acting) City Manager
City of Schertz
1400 Schertz Parkway
Schertz, TX 78154-1634

The Honorable Dan Reese
Mayor of City of Windcrest
8601 Midcrown
Windcrest, TX 78239-2516

The Honorable Thomas Daly
Mayor of City of Selma
9375 Corporate Drive
Selma, TX 78154-1250

The Honorable Mary Dennis
Mayor of City of Live Oak
8001 Shin Oak Drive
Live Oak, TX 78233-2414

The Honorable Larry Thompson
Mayor of City of Garden Ridge
9357 Schoenthal Road
Garden Ridge, TX 78266-1839

The Honorable Stosch Boyle
Mayor of City of Cibolo
200 South Main Street
Cibolo, TX 78108-3512

The Honorable Don Keil
Mayor of City of Seguin
P.O. Box 591
Seguin, TX 78156-0591

The Honorable John Williams
Mayor of City of Universal City
2150 Universal City Blvd
Universal City, TX 78148-3443

The Honorable Al Suarez
Mayor of City of Converse
403 S. Seguin
Converse, TX 78109-2121

Tribal Government Contacts

Mr. William Nelson, Sr., Chairman
Comanche Nation
PO Box 908
Lawton, OK 73502

Terri Parton, President
Wichita and Affiliated Tribes
PO Box 729
Andarko, OK 73005

Mr. Arthur Blazer, President
Mescalero Apache Tribe of the Mescalero Reservation
P.O. Box 227
Mescalero, NM 88340

Mr. Russell Martin, President
Tonkawa Tribe of Indians of Oklahoma
1 Rush Buffalo Road
Tonkawa, OK 74653-4449

Example Public Scoping Letter

DEPARTMENT OF THE AIR FORCE
12TH FLYING TRAINING WING
JOINT BASE SAN ANTONIO – RANDOLPH TEXAS

04 March 2019

Colonel Mark S. Robinson
12 FTW/CC
1 Washington Circle, Suite 1
JBSA-Randolph, TX 78150

Regional Administrator
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202

Dear Regional Administrator,

The United States Air Force (USAF) is preparing an Environmental Impact Statement (EIS) to evaluate potential environmental impacts associated with the proposed replacement of the T-38C training aircraft with an unnamed aircraft currently designated as the T-X at Joint Base San Antonio (JBSA)-Randolph, Texas. A Notice of Intent for this EIS was published in the Federal Register on 6 February 2019. This letter serves as notification of the start of the public scoping and environmental review processes.

In addition to the phased replacement of the T-38C with the T-X aircraft, 5 military construction projects and 14 facilities sustainment, restoration, and modernization projects would occur at JBSA-Randolph to provide modern facilities and infrastructure supporting the T-X aircraft's maintenance, training, and operational requirements. All flight operations for the proposed T-X aircraft would take place within existing airspace. Additions to or alterations of airspace are not being considered. Additional information about the T-X recapitalization and associated proposed actions is provided in the attached fact sheet and online at www.TXRecapitalizationEIS.com.

The USAF will also host two open-house public scoping meetings. The purpose of the meetings and the scoping comment period is to solicit input on the proposed actions and alternatives to be analyzed in the EIS. The USAF invites the public, stakeholders, and other interested parties to attend the public scoping meetings from 5 p.m. to 8 p.m. at the following locations:

- 19 March 2019, Olympia Hills Golf & Event Center, 12900 Mt. Olympus, Universal City, Texas
- 20 March 2019, Midway Hall, 728 Midway, Sequin, Texas

Comments or questions regarding this project may be directed to Mr. Christopher Moore via email at christopher.moore.114@us.af.mil or mail at AFCEC/CZN, Attn: T-X Recapitalization EIS, 2261 Hughes Ave, Suite 155, JBSA-Lackland, TX 78236- 9853.

Sincerely

MARK S. ROBINSON, Colonel, USAF
Commander

Attachment: T-X Recapitalization Environmental Impact Statement Fact Sheet

Public Scoping Fact Sheet

T-X Recapitalization
Environmental Impact Statement

Joint Base San Antonio-Randolph

JBSA-Randolph T-X Recapitalization: Public Scoping

Introduction

The National Environmental Policy Act (NEPA) was enacted to address concerns about federal actions and their effects on the environment. An Environmental Impact Statement (EIS) is the most detailed analysis prescribed by regulations implementing NEPA. An EIS is a public document and public involvement is a vital component of the NEPA process.

The U.S. Air Force (USAF) has published a Notice of Intent (NOI) to prepare an EIS, pursuant to NEPA, for the proposed Joint Base San Antonio (JBSA)-Randolph T-X Recapitalization. The Proposed Action includes the introduction and use of the new generation T-X training aircraft and associated construction and renovation of support facilities at JBSA-Randolph.

Background of the U.S. Air Force T-X Recapitalization Program

The new T-X aircraft will allow USAF Pilots to train more efficiently and effectively to fly 4th and 5th generation USAF aircraft. Other benefits of the T-X aircraft would include improved technology and improved maintenance leading to less downtime of the aircraft, and increased simulator training in the pilot training program. Deliveries of the new aircraft would start in fiscal year (FY) 2023.

The USAF's Air Education and Training Command developed a phased plan that would initiate T-X aircraft implementation activities at JBSA-Randolph because JBSA-Randolph conducts the majority of the USAF's Pilot Instructor Training (PIT) and is an Introduction to Fighter Fundamentals (IFF) training location. Initial basing of T-X aircraft at JBSA-Randolph would be an essential first step in establishing a T-X PIT pipeline and would allow for implementing T-X training at other pilot training bases that would be using the T-X Advanced Pilot Training Program.

What is the Public Scoping Process?

Public scoping is an early and open process for identifying issues and alternatives to be addressed in an EIS and determining who (e.g., public and government agencies) is interested in the Proposed Action. Conducting public scoping for the proposed T-X recapitalization and facility construction and improvements helps inform interested stakeholders, elicit valuable community input, and provide transparency through a mutual exchange of information. The public scoping process began with publication of the NOI. Comments received during the public scoping process will be considered in the preparation of the Draft EIS. See the process on the back of this page for additional information regarding the preparation of the EIS.

Proposed Action and Alternatives

The Proposed Action is to recapitalize the T-38C fleet with new T-X aircraft. The Proposed Action at JBSA-Randolph includes the construction and improvement of support facilities for training and maintenance of the T-X aircraft. The proposed five major construction projects include a Maintenance Training System facility, a Ground Based Training System facility, a Hush House pad, a Fuel Cell facility, and Installation of 65 Sunshades. Additionally, there are 14 minor renovation projects of existing facilities to support similar missions now conducted in those facilities. The Proposed Action has three alternative approaches. Each alternative includes the previously mentioned proposed facility construction and improvements:

- **Alternative 1 – Baseline Projected T-X Aircraft Operations:** The T-X aircraft would conduct training events for PIT and IFF training. Up to 600 nighttime T-X operations would be conducted annually and phased in at a proportionate level to daytime operations. The T-X aircraft would perform the same types of operations now performed by the T-38C aircraft, but may have minor adjustments to account for the handling and enhanced capabilities of the newer T-X aircraft. T-X aircraft training events would occur at training locations now used by T-38C aircraft within the training region of JBSA-Randolph such as Seguin Auxiliary Field.
- **Alternative 2 – Increased T-X Aircraft Operations:** The T-X aircraft would conduct training events for PIT and IFF training at operational intensities that are 20 percent greater than those defined for Alternative 1 and with a 20 percent increase in annual nighttime operations (i.e., 720 nighttime T-X operations). Alternative 2 is intended to cover a scenario in which, for either broad strategic or tactical operational reasons, USAF requires a surge or increase in training operations.
- **Alternative 3 – Conduct T-X Operations in Conjunction with a Reduced Level of T-38C Operations:** This alternative would maintain the level of T-X operations detailed in Alternative 2, but would have a continued, sustained level of T-38C operations occurring at 10,000 per year starting in FY28 and going forward. This would allow for the more advanced pilot training to be implemented while sustaining legacy aircraft operations at a reduced level.

Comments, suggestions, and relevant information are welcomed on the proposal. Please submit comments in English at the public scoping meeting by visiting the project website (see bottom of page) or contacting Mr. Christopher Moore at the address below.

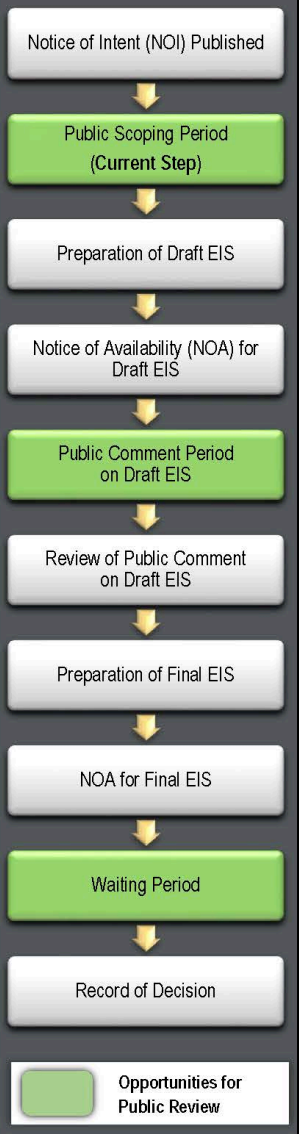
Address comments to:

Mr. Christopher Moore, AFCEC/CZN
Attn: T-X Recapitalization EIS
2261 Hughes Ave, Suite 155
JBSA Lackland, TX 78236-9853

The USAF also welcomes comments under Section 106 of the National Historic Preservation Act (36 Code of Federal Regulations Part 800) regarding the identification of or effects on historic properties, and requests to become a consulting party in the Section 106 process.

Updated: March 8, 2019.

JBSA-Randolph T-X Recapitalization EIS Process



www.TXRecapitalizationEIS.com

To ensure the USAF has sufficient time to consider public input, please submit all comments by April 5, 2019!

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Appendix B

Draft Agreement Between the Department of the Air Force and the State of Texas

AGREEMENT TO ESTABLISH OPERATIONS AND EMISSIONS LIMITATIONS FOR PURPOSES OF A GENERAL CONFOMRITY *DEMINIMIS* FINDING FOR THE T-7A BASING ACTION AT JOINT BASE SAN ANTONIO-RANDOLPH, BEXAR COUNTY TEXAS

1. Parties to the Agreement. The parties to the agreement are the State of Texas and the United States Department of the Air Force (DAF).

2. Joint Base San Antonio-Randolph (Hereafter JBSA-Randolph) is located in Bexar County. Texas, a non-attainment area for the criteria pollutant Ozone (O_3) under the Clean Air Act (42 U.S.C. §§ 7401, et.seq.). As a result, proposed Federal actions must be evaluated to ensure conformity with the State Implementation Plan in accordance with 42 U.S.C. § 7506(c) and 40 CFR Part 93, Subpart B.

3. The DAF will conduct T-7A operations in Bexar County in accordance with the Record of Decision (ROD) signed on **TBD**, which is prepared and implemented in accordance with the National Environmental Policy Act (42 U.S.C. §§ 4231 et seq), 40 CFR Part 1500 et seq; and 32 CFR Part 989. The state of Texas acknowledges that operations conducted in accordance with the ROD are *de minimis* in accordance with 40 CFR § 93.153.
4. This agreement shall be effective when the ROD authorizing the basing and operations of the T-7A is executed and becomes effective.
5. The DAF will establish a schedule of operations and maintain records of operations of the T-7A in Bexar County, TX on a monthly basis. The schedule will be established as set forth in Appendix A to this agreement. The records, the format of which is established in Appendix B, will be maintained for a minimum of five years and supplied to the State of Texas upon request.
6.

_____ _____

802 ABW/CC State of Texas

Attachments:

1. Appendix A
2. Appendix B

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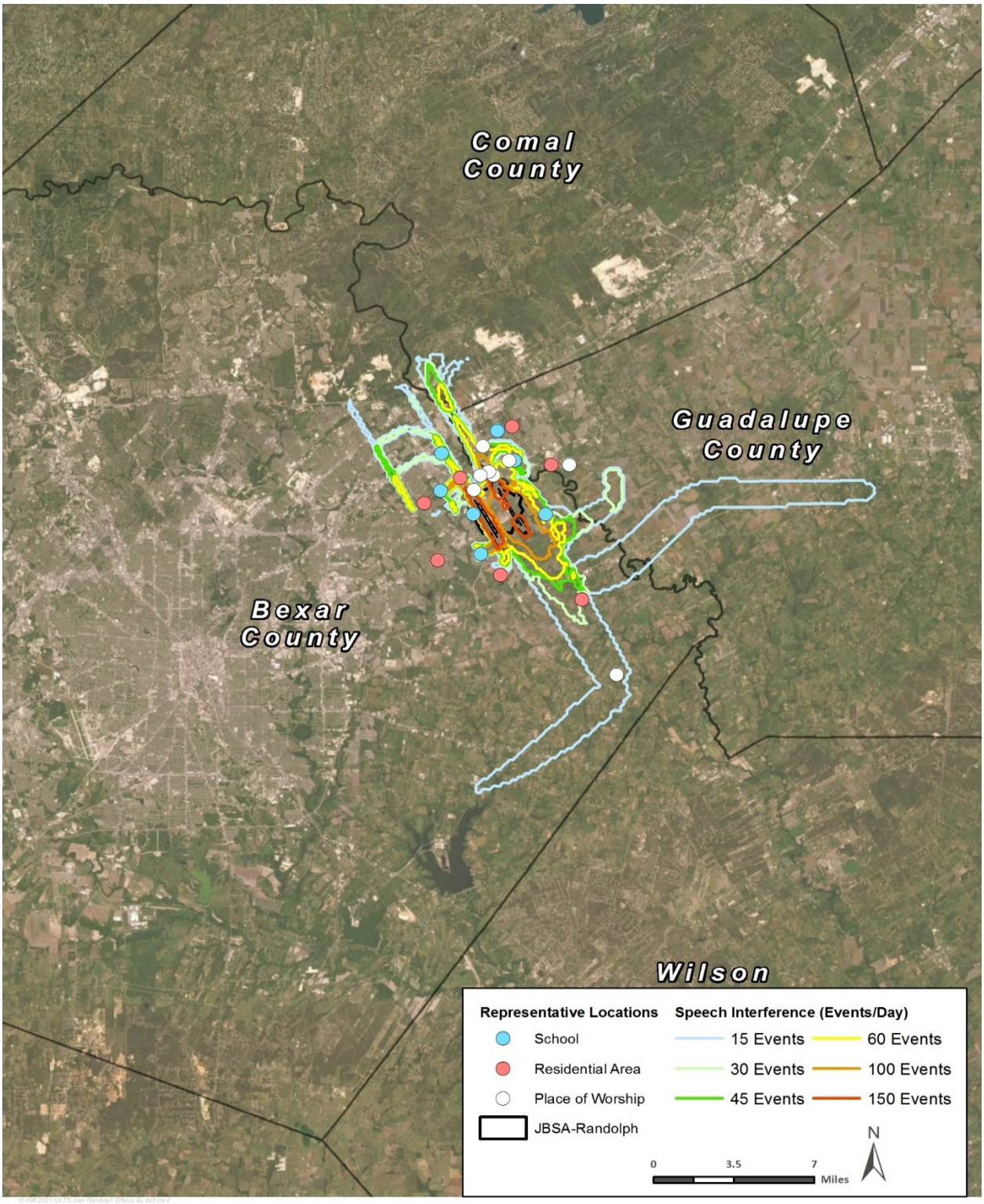
Appendix C

Noise Supporting Documentation

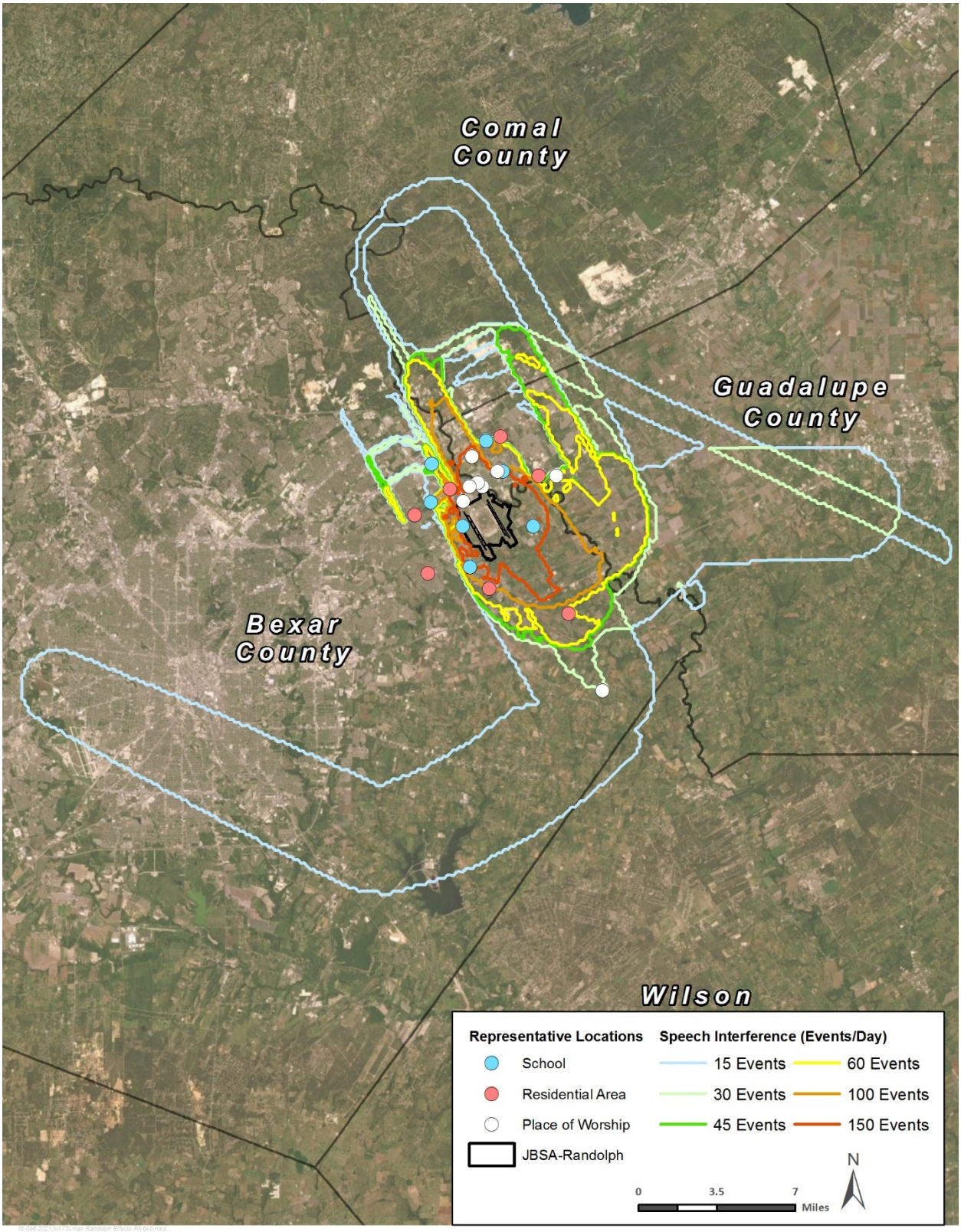
Supplemental Noise Metric Figures

The data used to model the Proposed Action and action alternatives and produce potential noise footprints presented in this section were based on the best available information at the time of data collection and analysis. The results shown in the following figures may not represent the actual noise contours that will be experienced once the T-7A is placed into operation at JBSA-Randolph or Seguin AAF. The T-7A aircraft has not yet been accepted into the inventory of the DAF. The aircraft is still undergoing testing by the manufacturer and much is still unknown about the aircraft's operating features by DAF. The aircraft testing being performed by the manufacturer does not represent the training location, settings, speeds, or patterns that will occur at the proposed training locations. While many of the features of the aircraft are known which will influence the resultant noise footprints, the precise manner in which the aircraft will be operated is not yet defined and therefore, the model results presented herein represent the best estimation of impacts at this time. Because much of the information regarding T-7A operations will not be known until the aircraft is delivered and operated in the local area, many assumptions were made to input data into the noise modeling process. As such, the DAF has assumed that the initial T-7A operations, flight patterns, throttle settings, altitudes, use of afterburners, and other relevant flight parameters will be the same as those currently defined and used for T-38C operations. Therefore, DAF has acknowledged the need to incorporate a strategy of adaptive management as detailed in Appendix D to learn, record, model, confirm, and adopt the appropriate flight parameters for the T-7A. These changes will likely change the predicted noise footprints and DAF will continue to investigate and update the data and results for potential noise impacts.



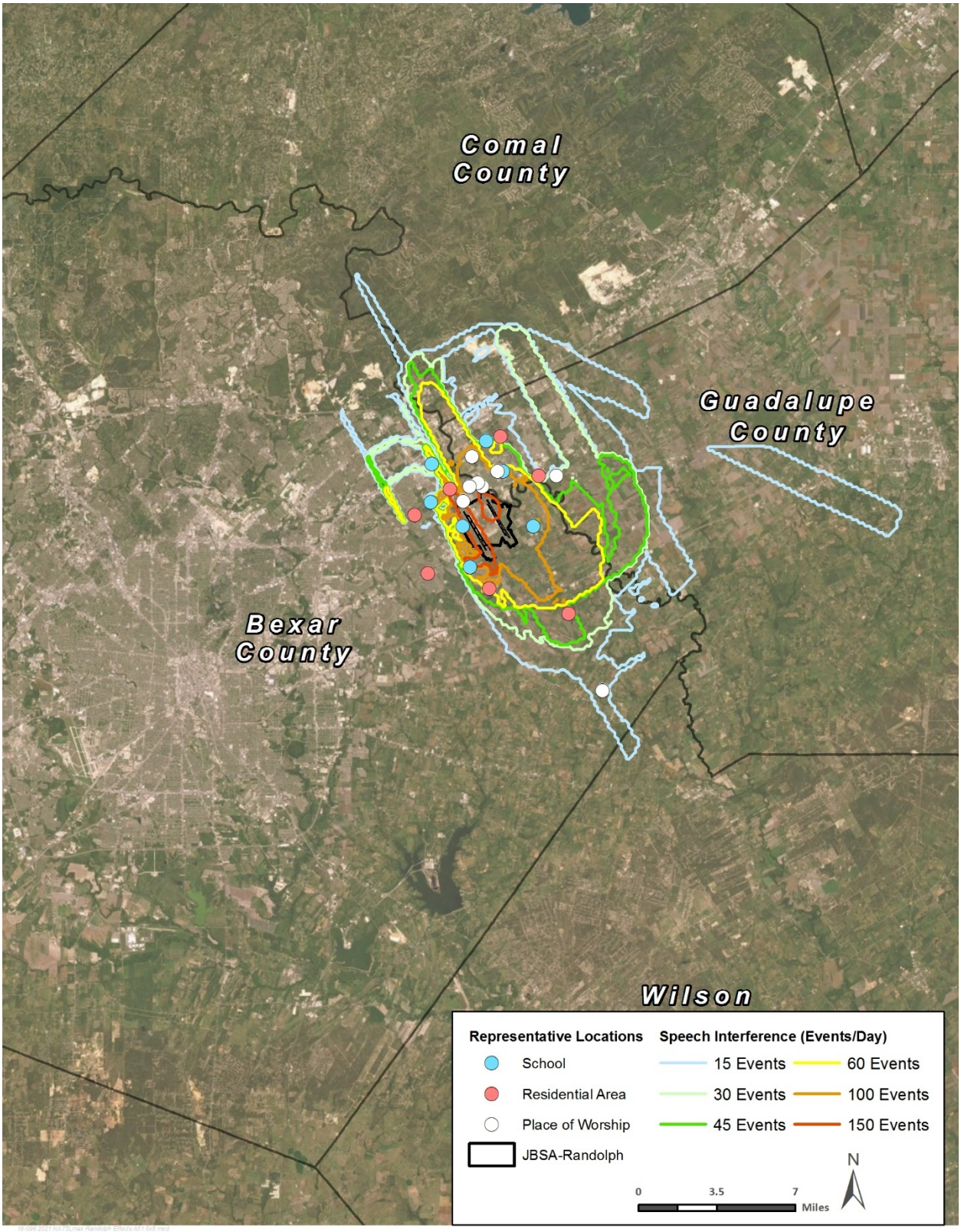
Sources: DAF 2020 and DNWG 2009a

Figure C-1. Speech Interference at JBSA-Randolph – Existing Conditions



Sources: DAF 2020 and DNWG 2009a

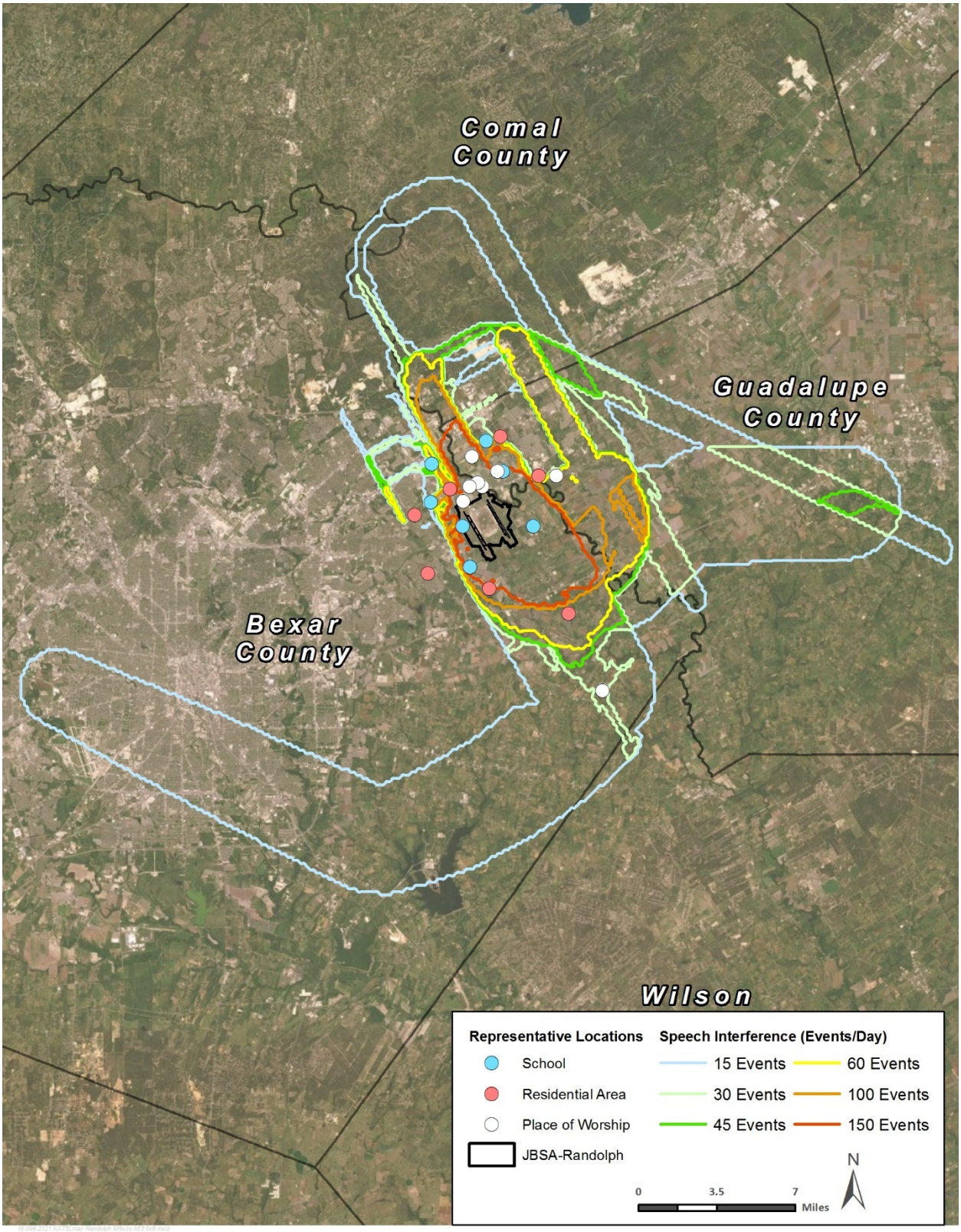
Figure C-2. Speech Interference at JBSA-Randolph – Proposed Action



Data Sources: ESRI and Texas Education Agency.

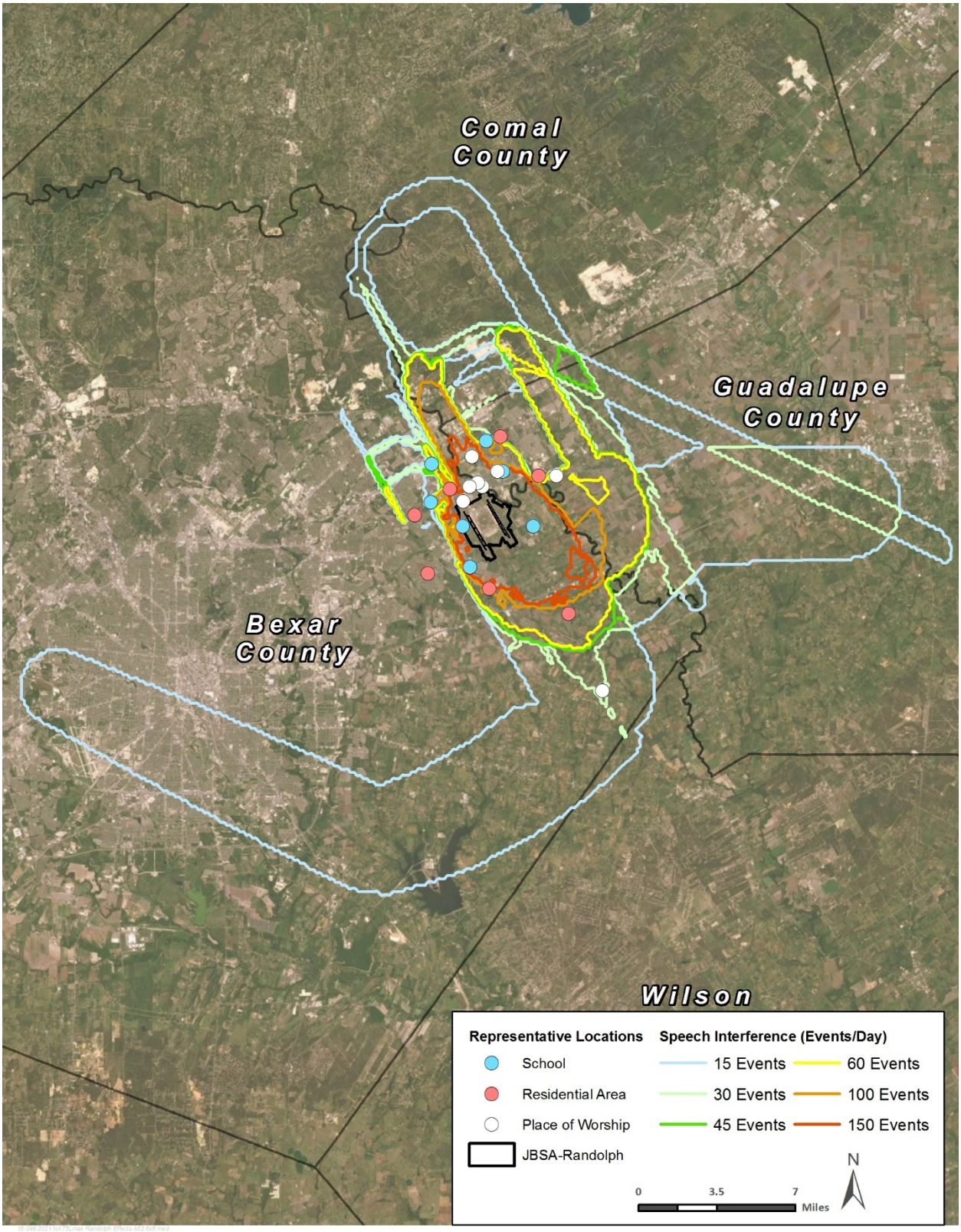
Sources: DAF 2020 and DNWG 2009a

Figure C-3. Speech Interference at JBSA-Randolph – Alternative 1



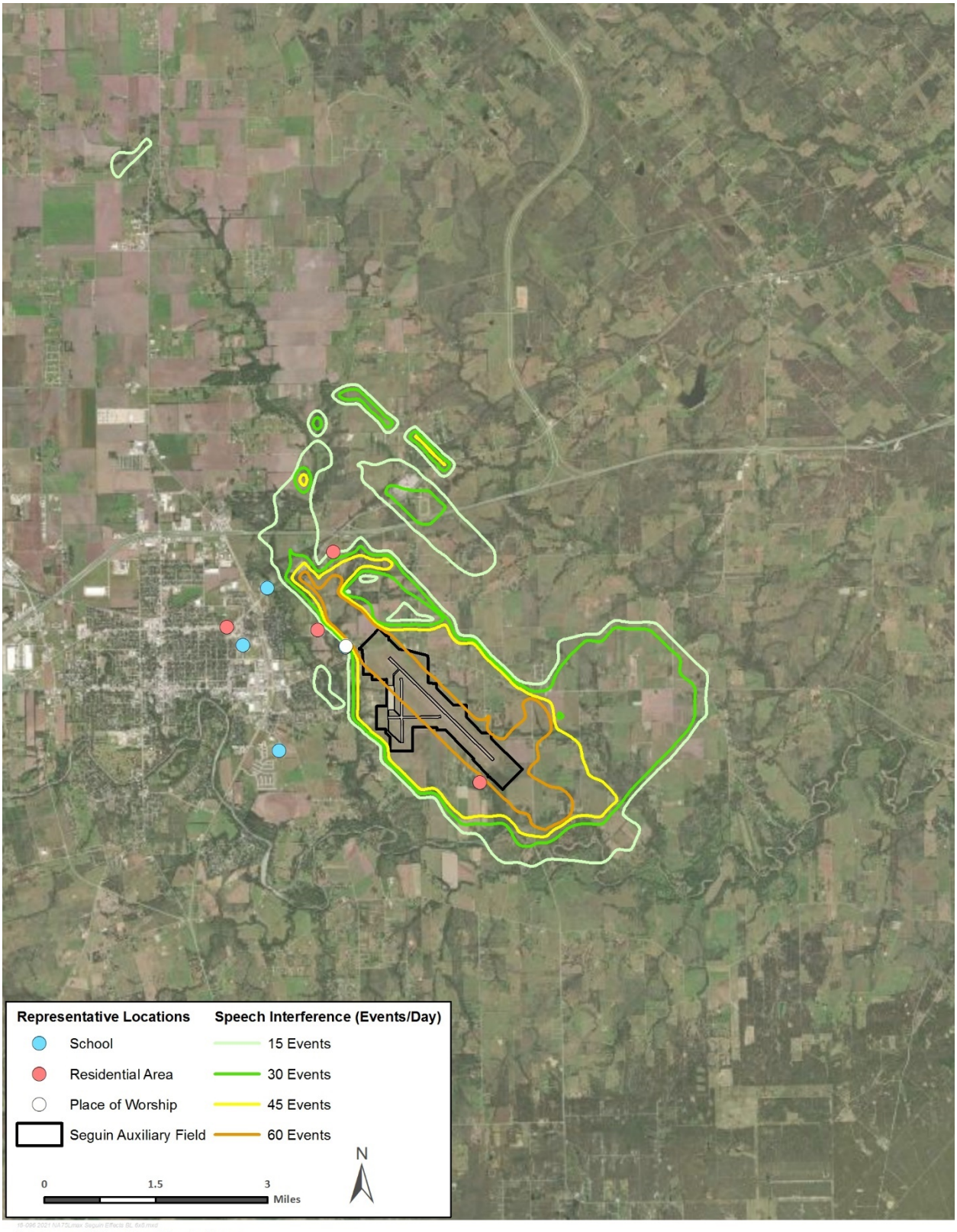
Sources: DAF 2020 and DNWG 2009a

Figure C-4. Speech Interference at JBSA-Randolph – Alternative 2



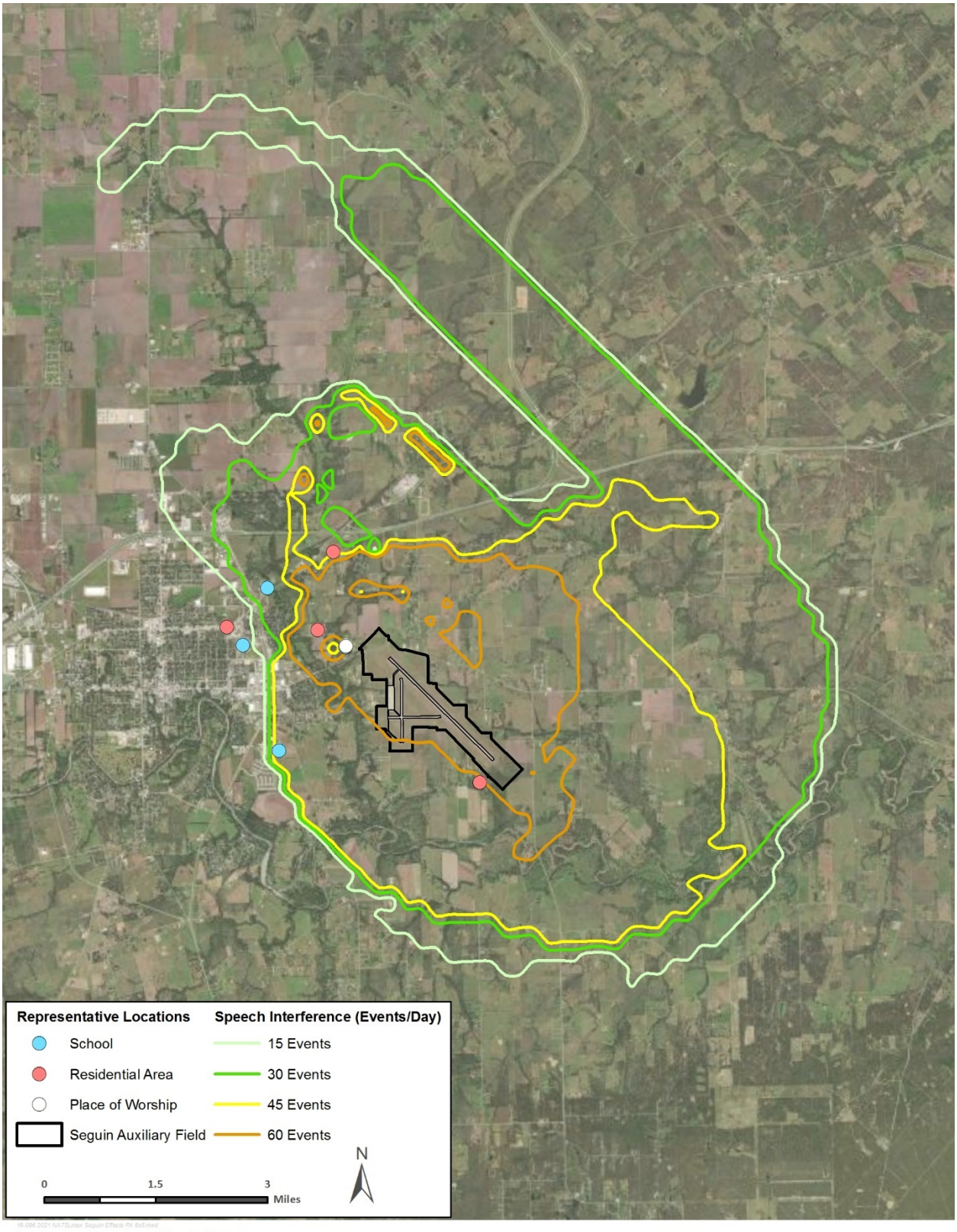
Sources: DAF 2020 and DNWG 2009a

Figure C-5. Speech Interference at JBSA-Randolph – Alternative 3



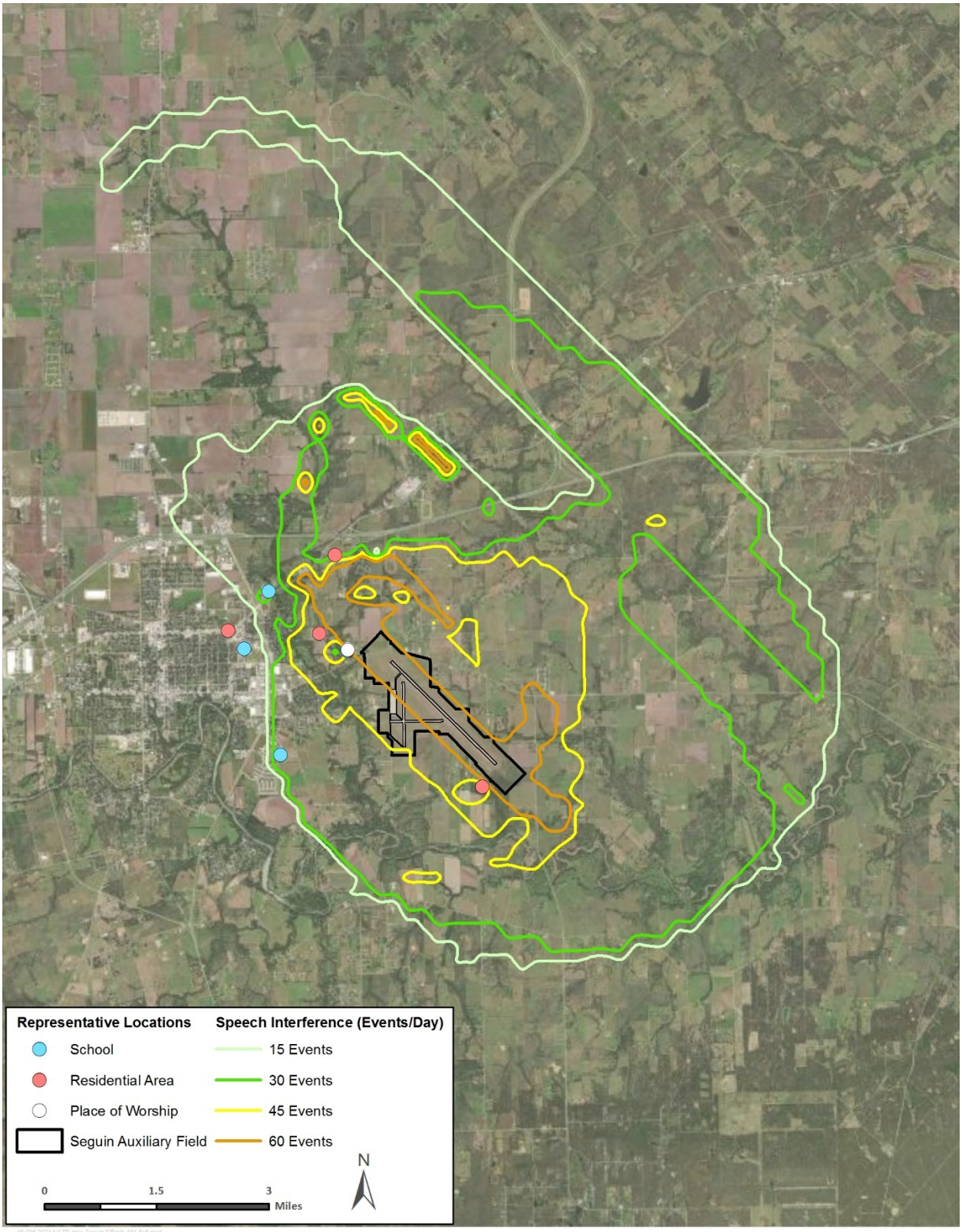
Sources: DAF 2020 and DNWG 2009a

Figure C-6. Speech Interference at Seguin AAF – Existing Conditions



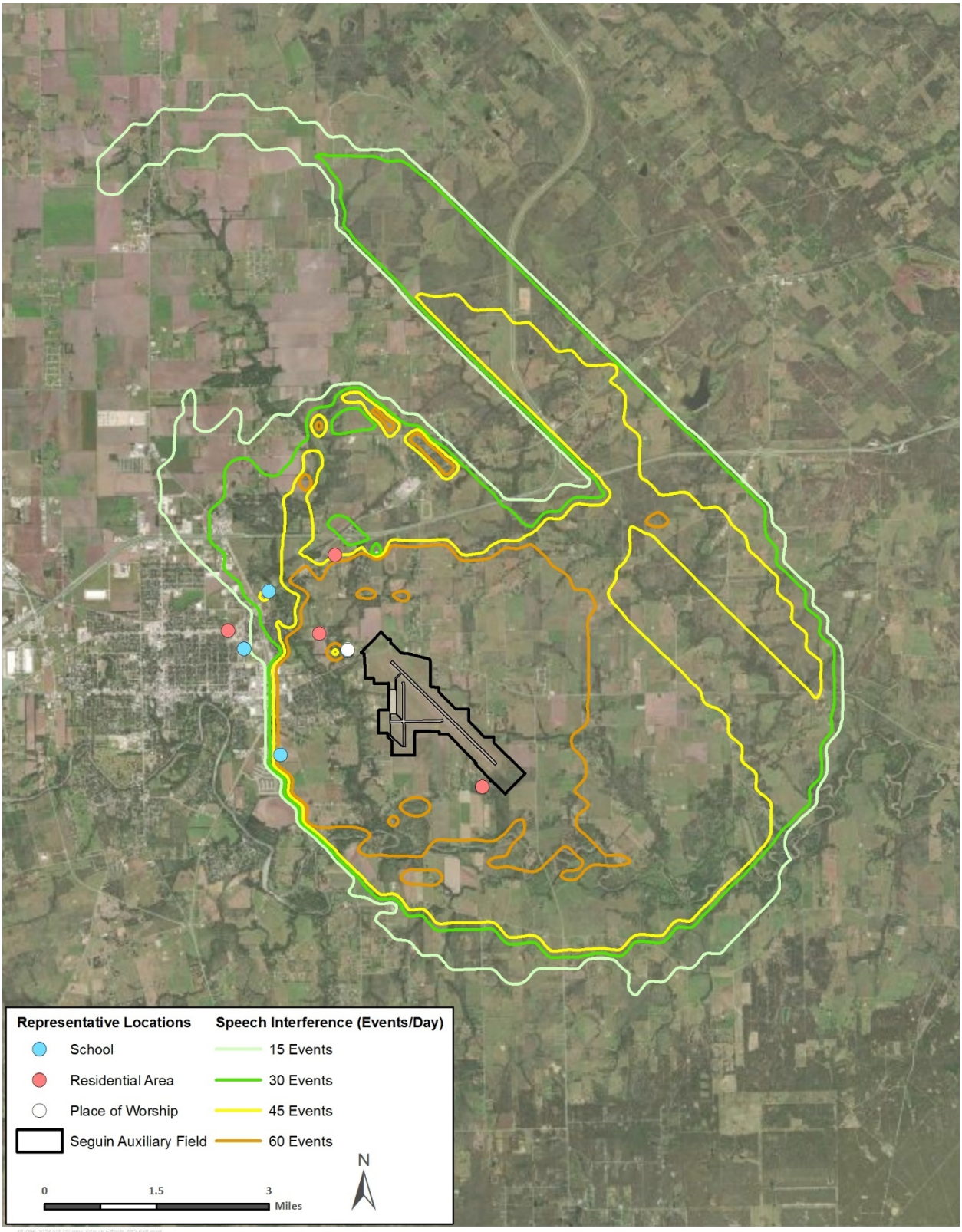
Sources: DAF 2020 and DNWG 2009a

Figure C-7. Speech Interference at Seguin AAF – Proposed Action



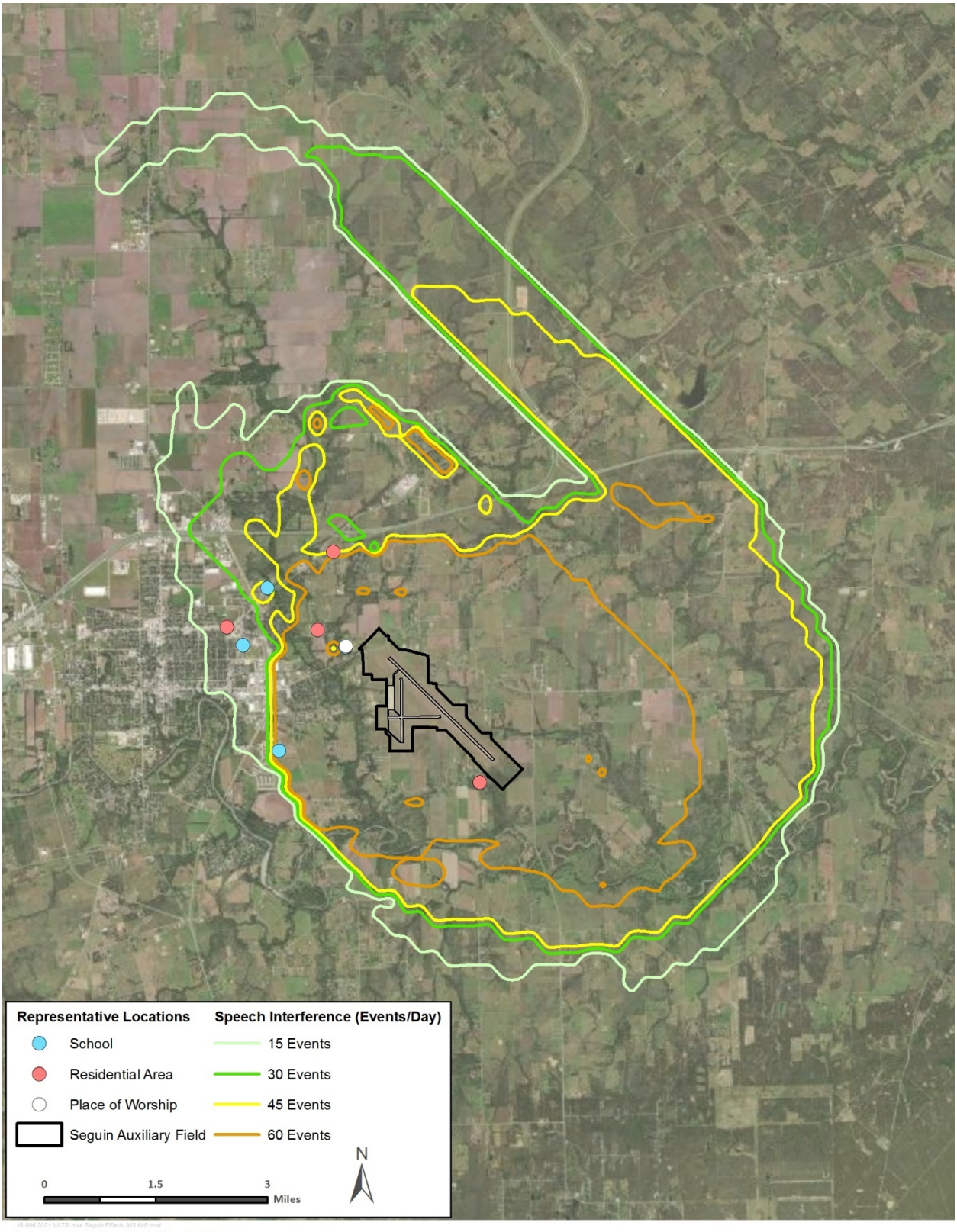
Sources: DAF 2020 and DNWG 2009a

Figure C-8. Speech Interference at Seguin AAF – Alternative 1



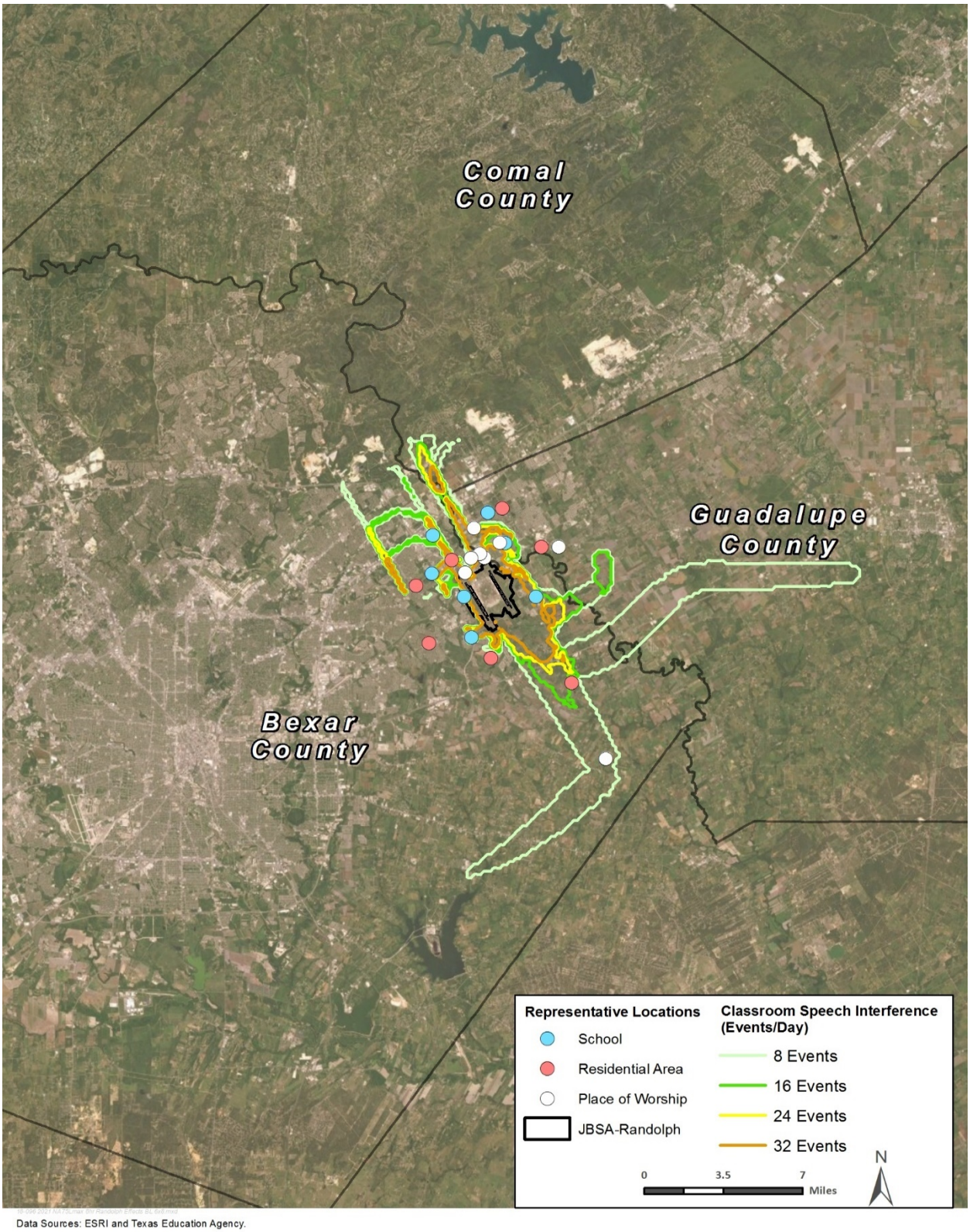
Sources: DAF 2020 and DNWG 2009a

Figure C-9. Speech Interference at Seguin AAF – Alternative 2



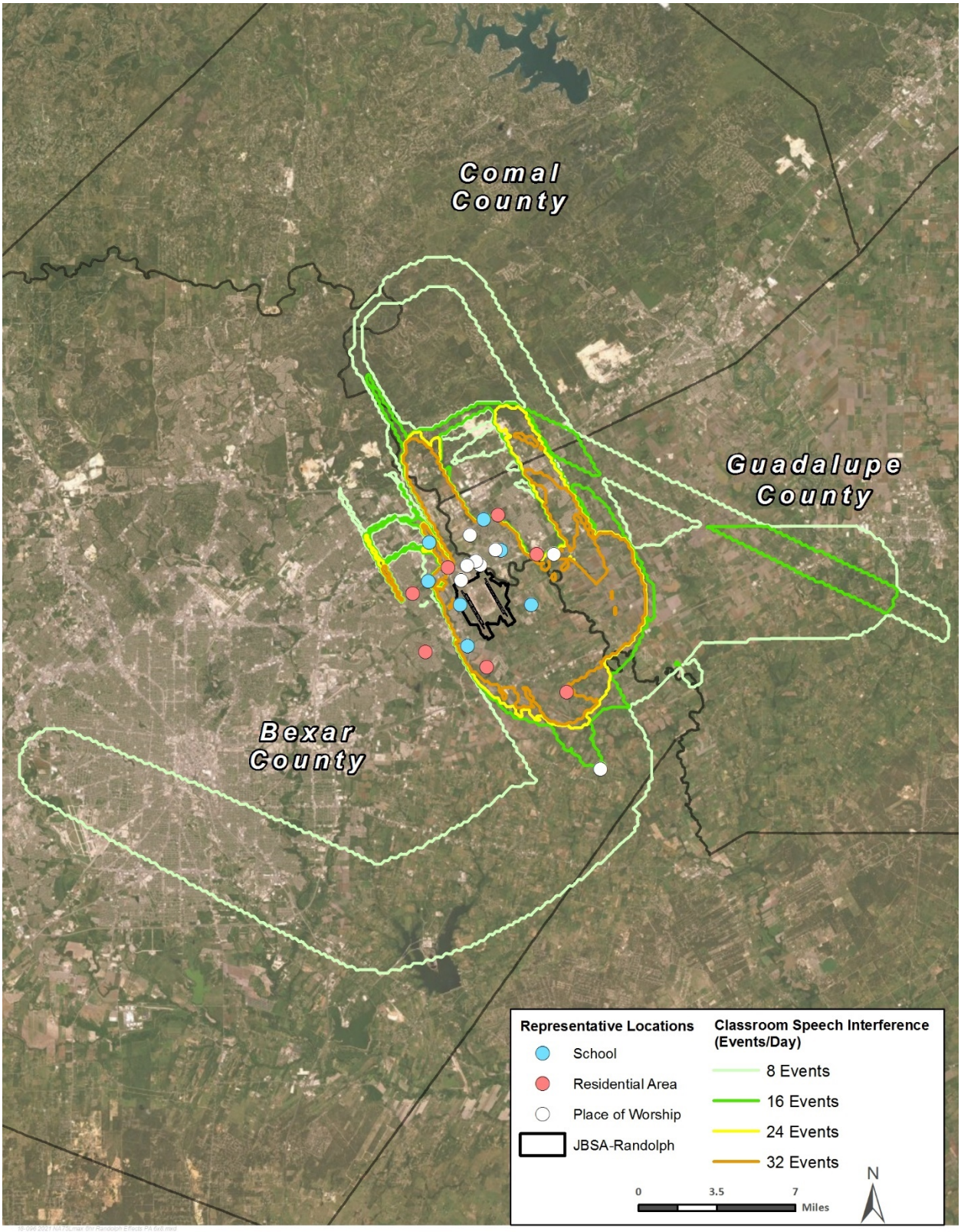
Sources: DAF 2020 and DNWG 2009a

Figure C-10. Speech Interference at Seguin AAF – Alternative 3



Sources: DAF 2020, ANSI 2008, and DNWG 2009a

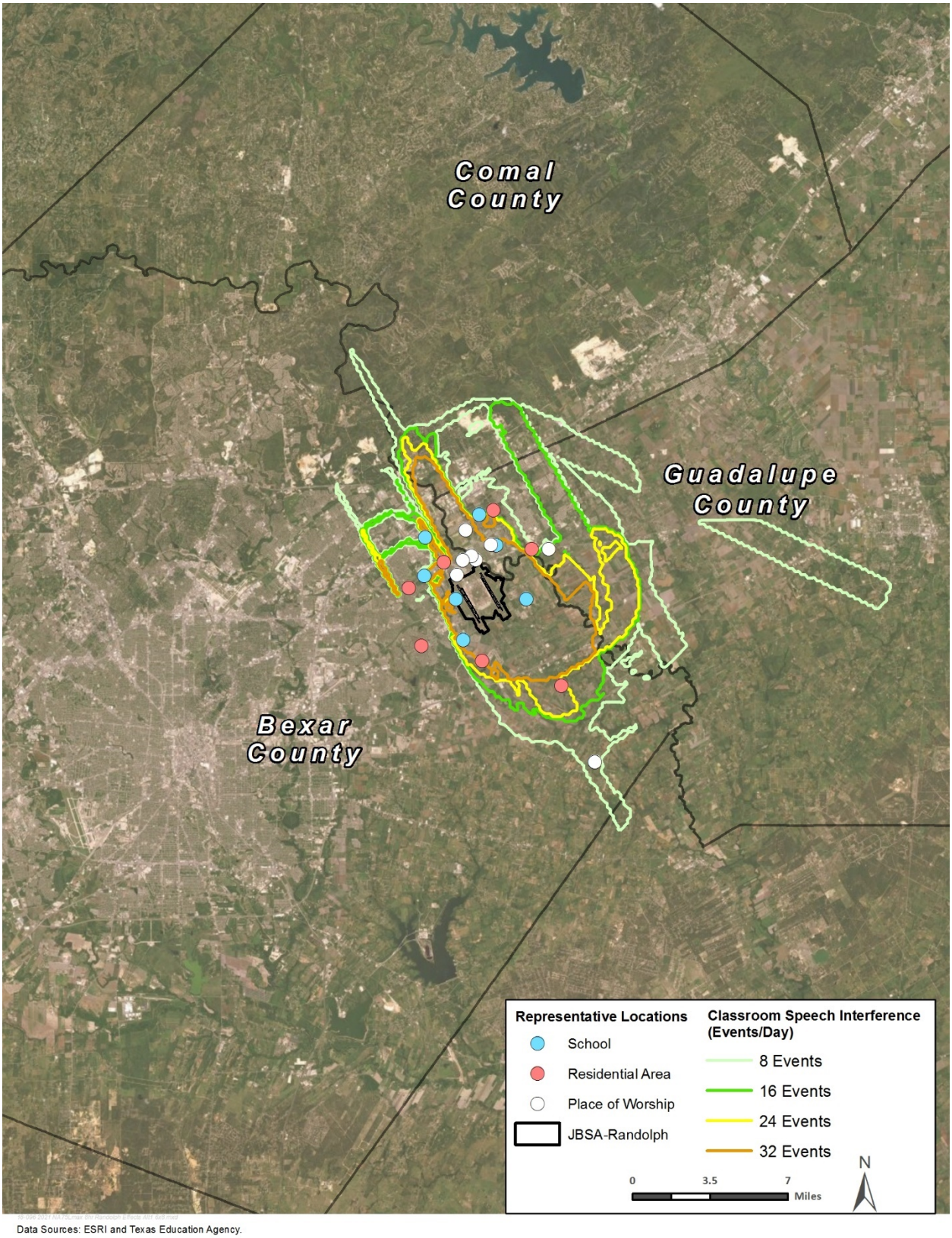
Figure C-11. Classroom Speech Interference Events at JBSA-Randolph – Existing Conditions



Data Sources: ESRI and Texas Education Agency.

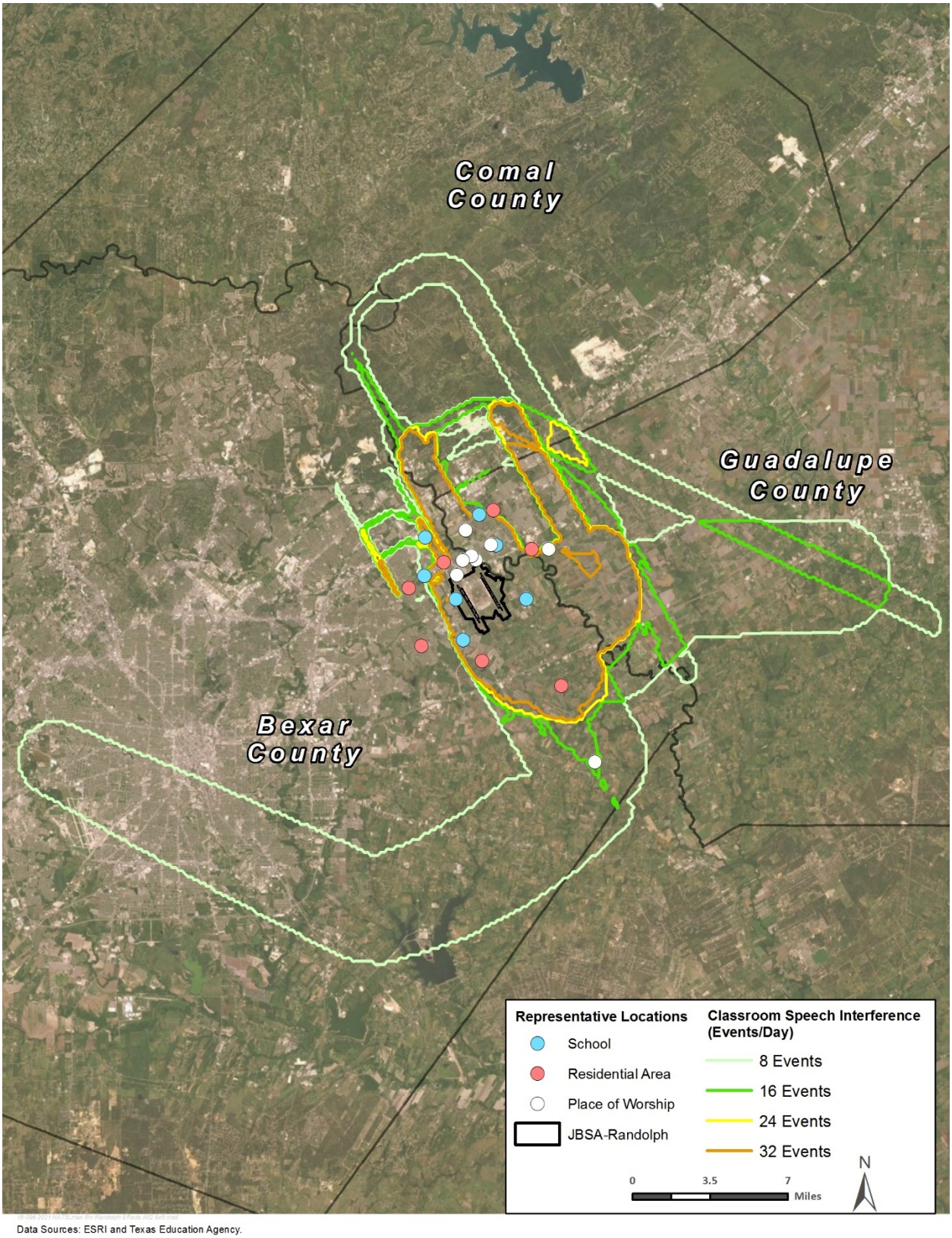
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-12. Classroom Speech Interference Events at JBSA-Randolph – Proposed Action



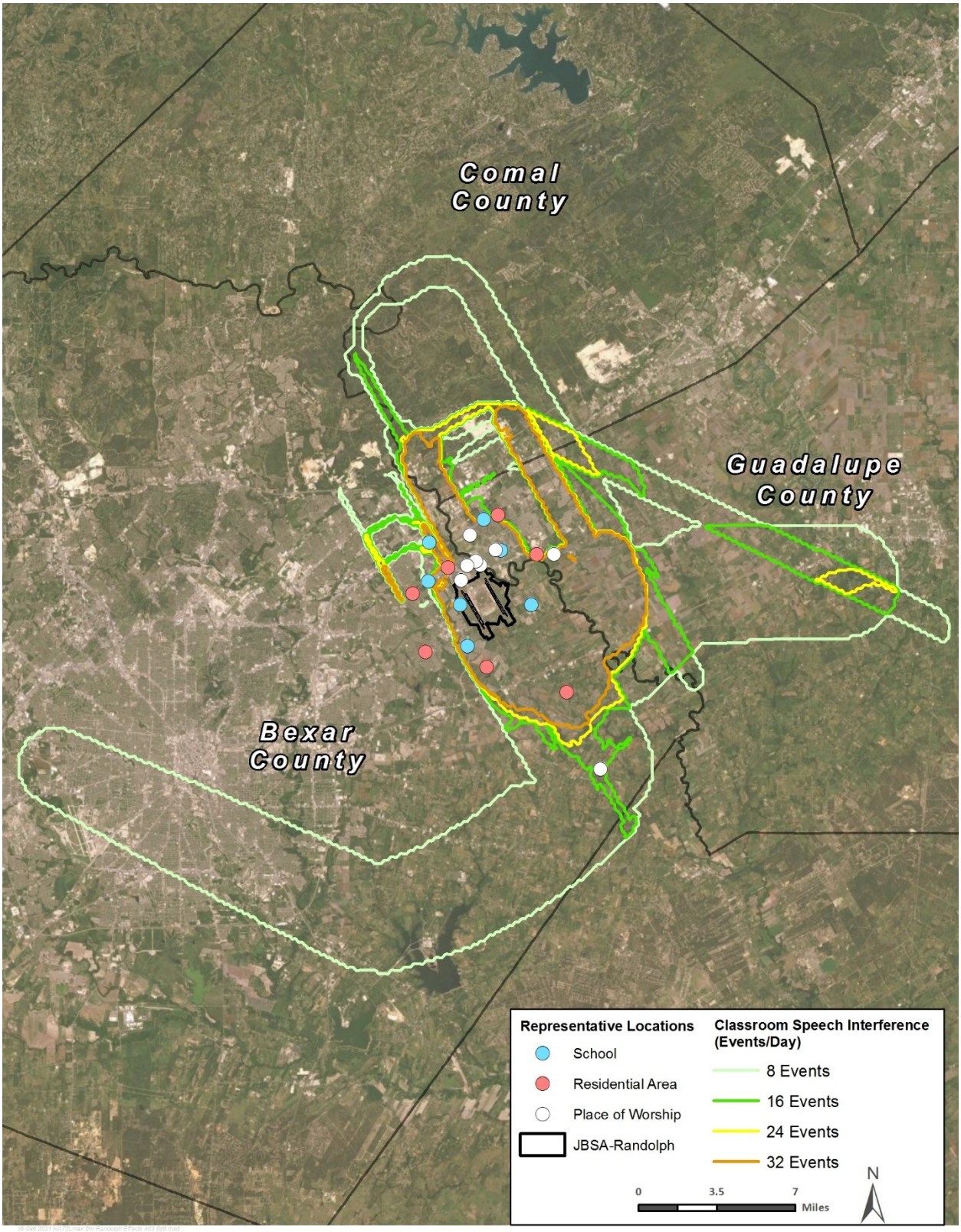
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-13. Classroom Speech Interference Events at JBSA-Randolph – Alternative 1



Sources: DAF 2020, ANSI 2008, and DNWG 2009a

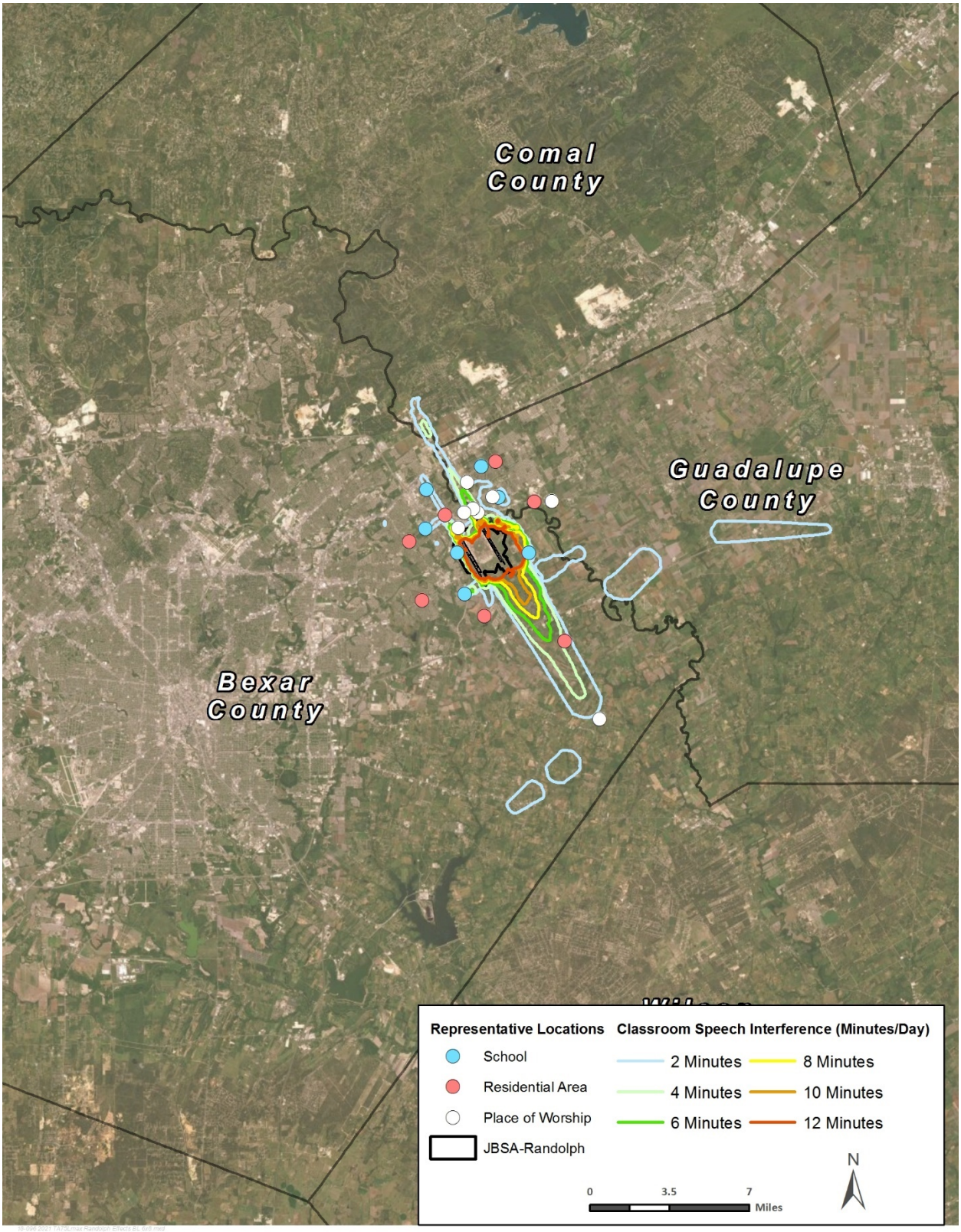
Figure C-14. Classroom Speech Interference Events at JBSA-Randolph – Alternative 2



Data Sources: ESRI and Texas Education Agency.

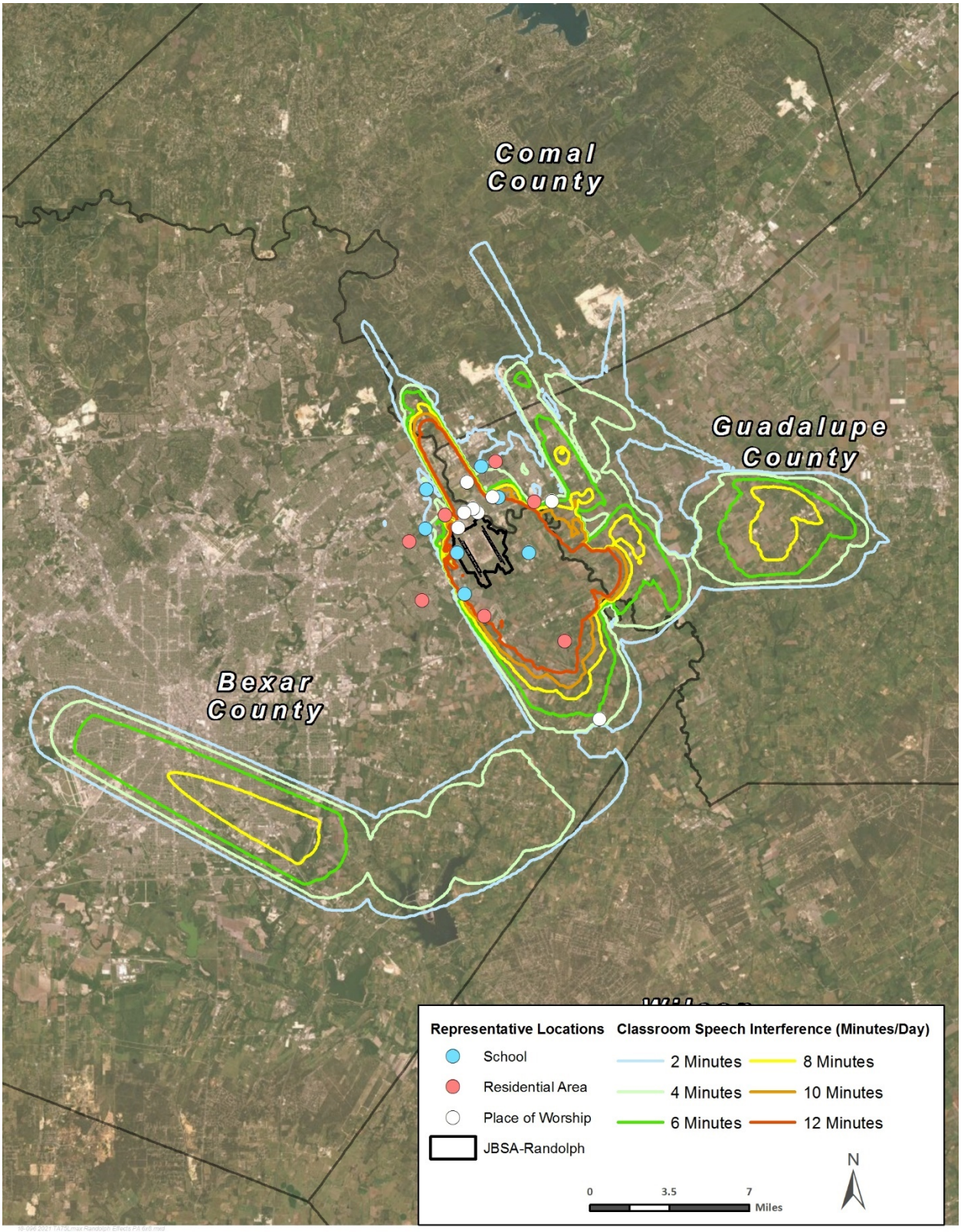
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-15. Classroom Speech Interference Events at JBSA-Randolph – Alternative 3



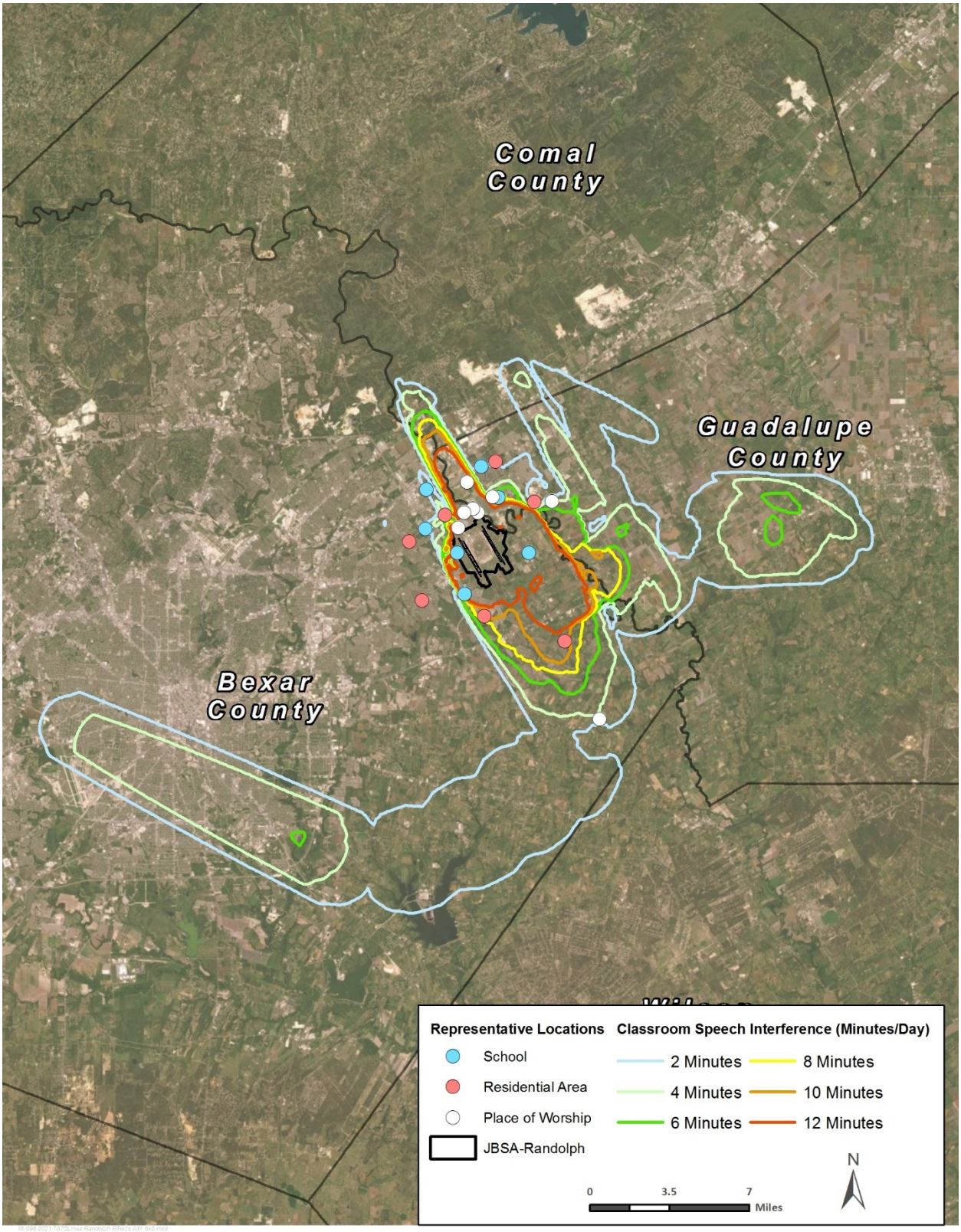
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-16. Classroom Speech Interference Time at JBSA-Randolph – Existing Conditions



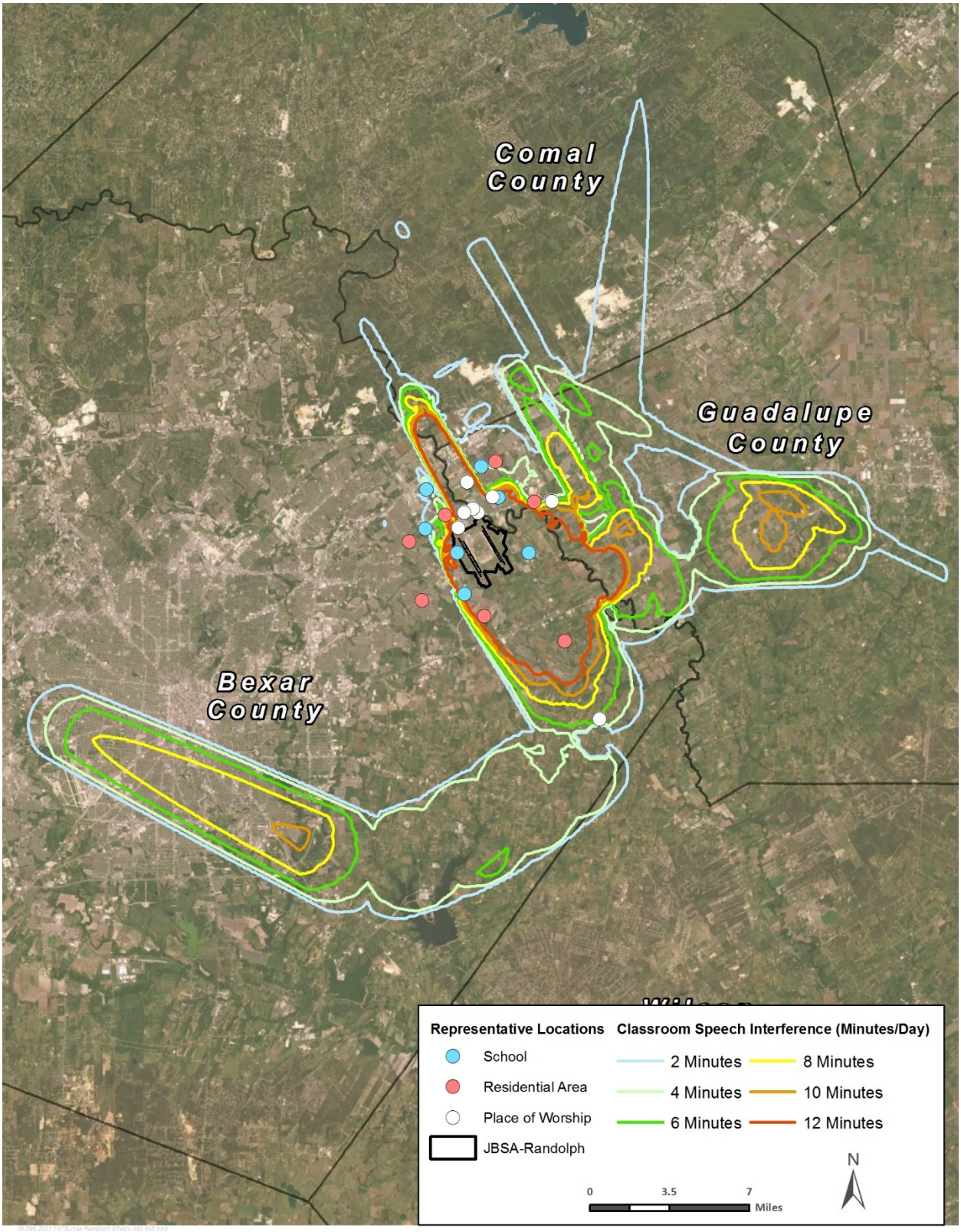
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-17. Classroom Speech Interference Time at JBSA-Randolph – Proposed Action



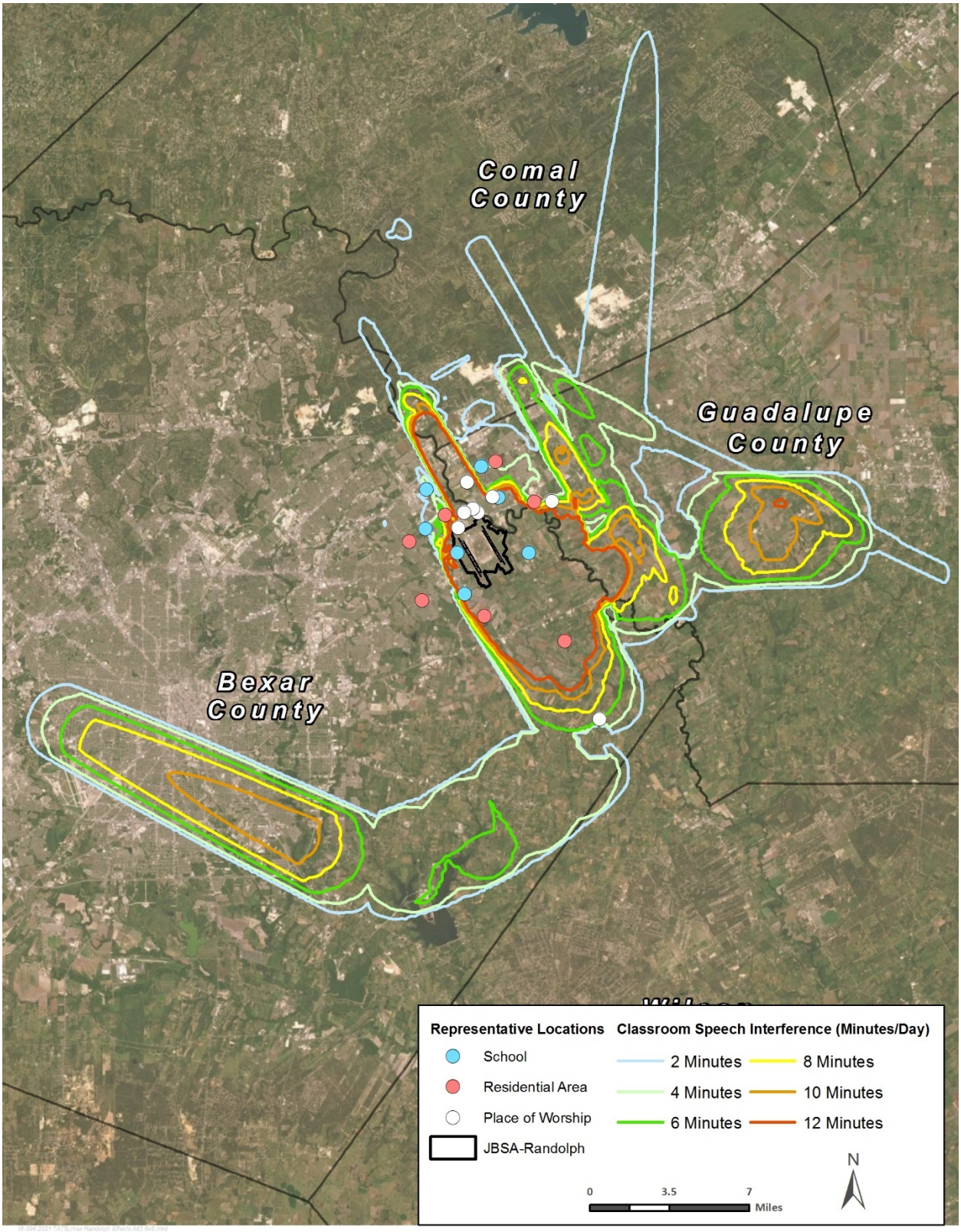
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-18. Classroom Speech Interference Time at JBSA-Randolph – Alternative 1



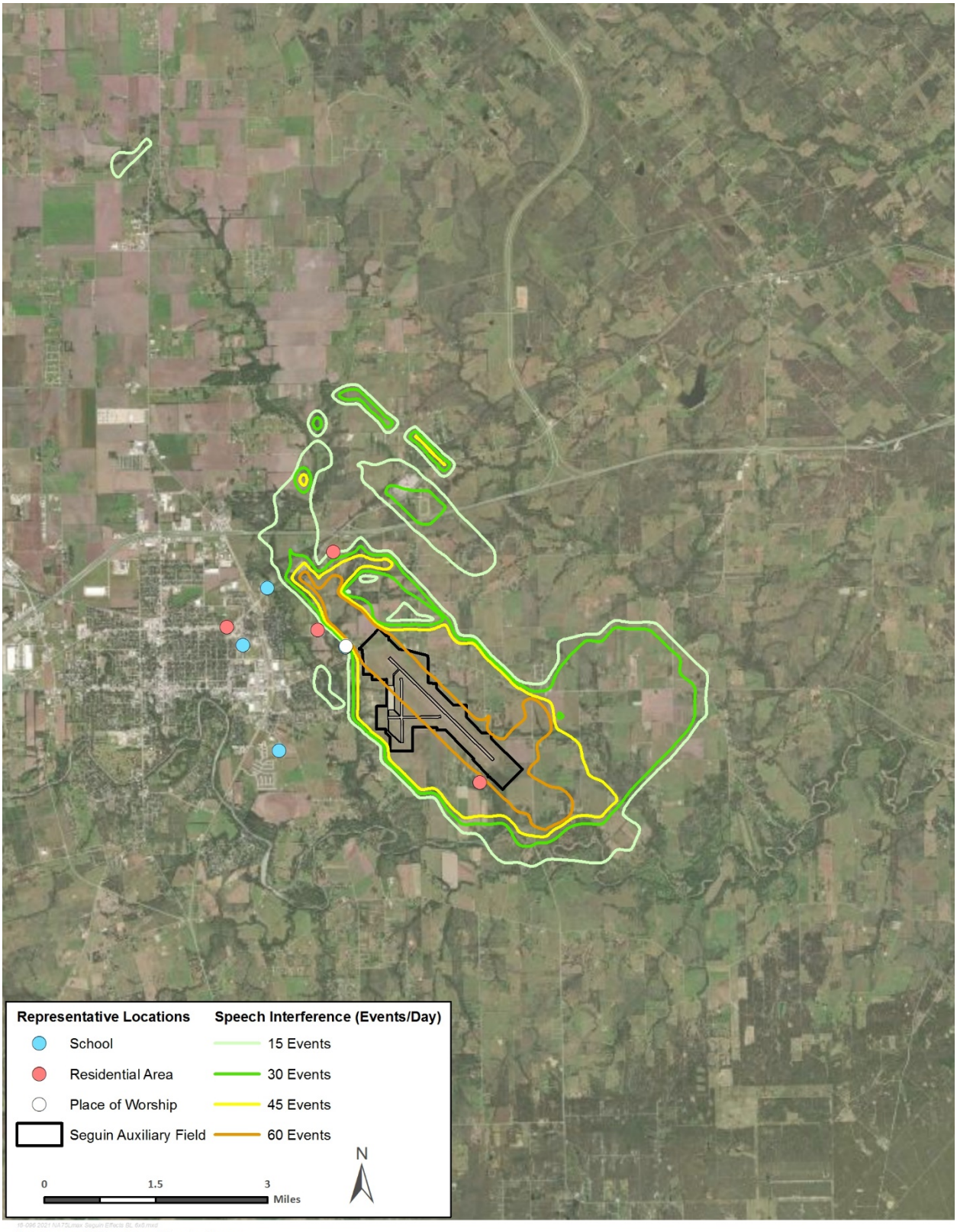
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-19. Classroom Speech Interference Time at JBSA-Randolph – Alternative 2



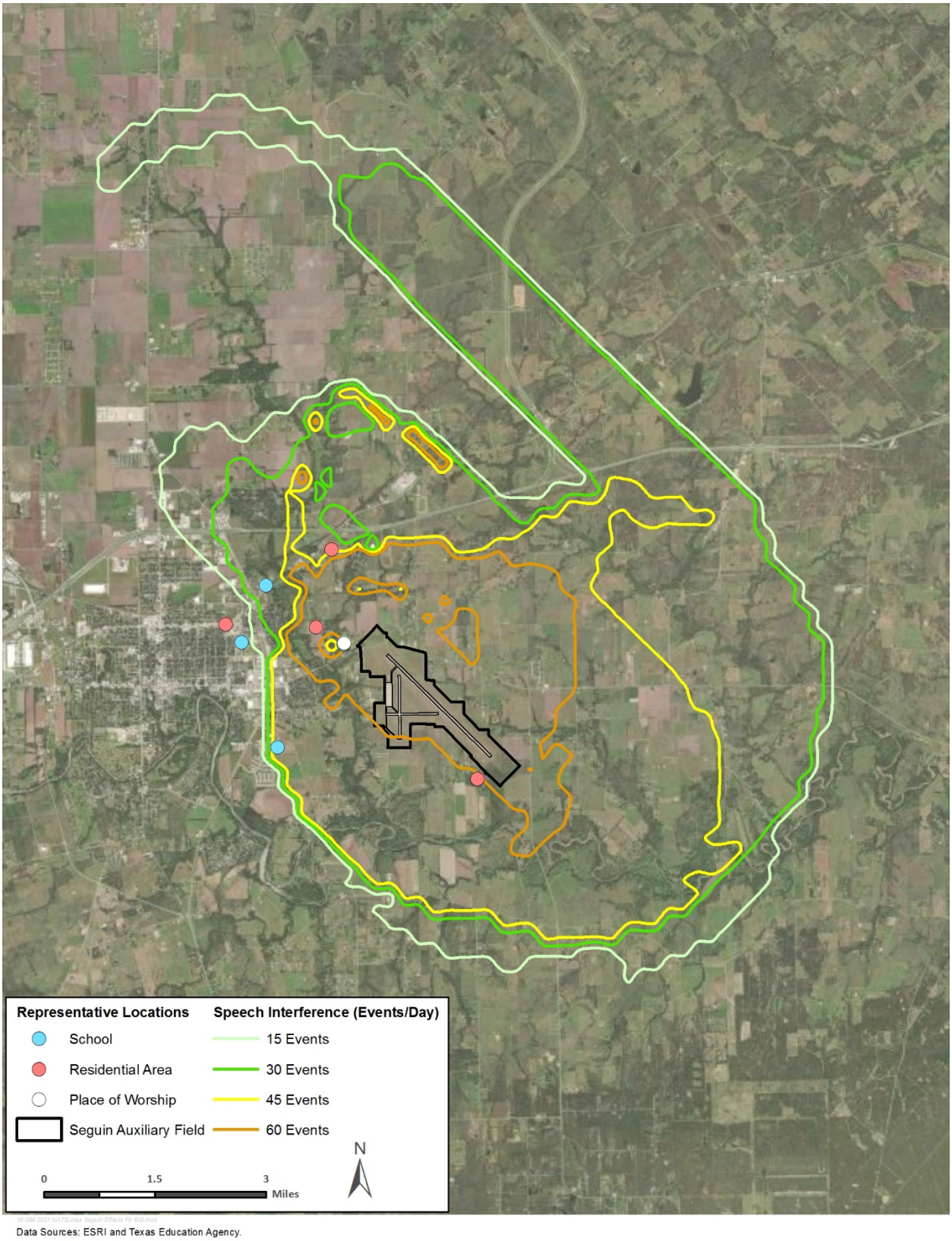
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-20. Classroom Speech Interference Time at JBSA-Randolph – Alternative 3



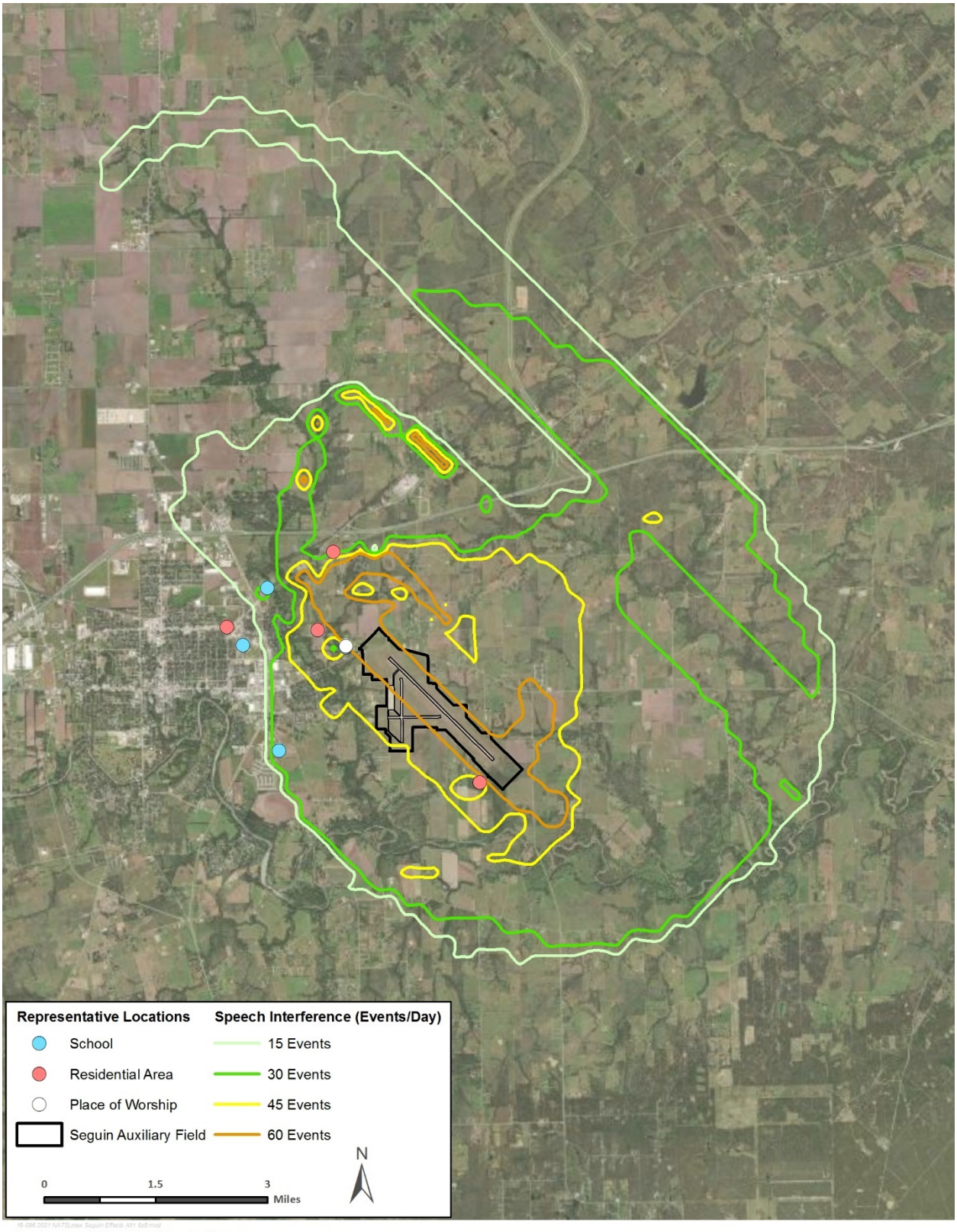
Sources: DAF 2020 and DNWG 2009a

Figure C-21. Classroom Speech Interference Events at Seguin AAF – Existing Conditions



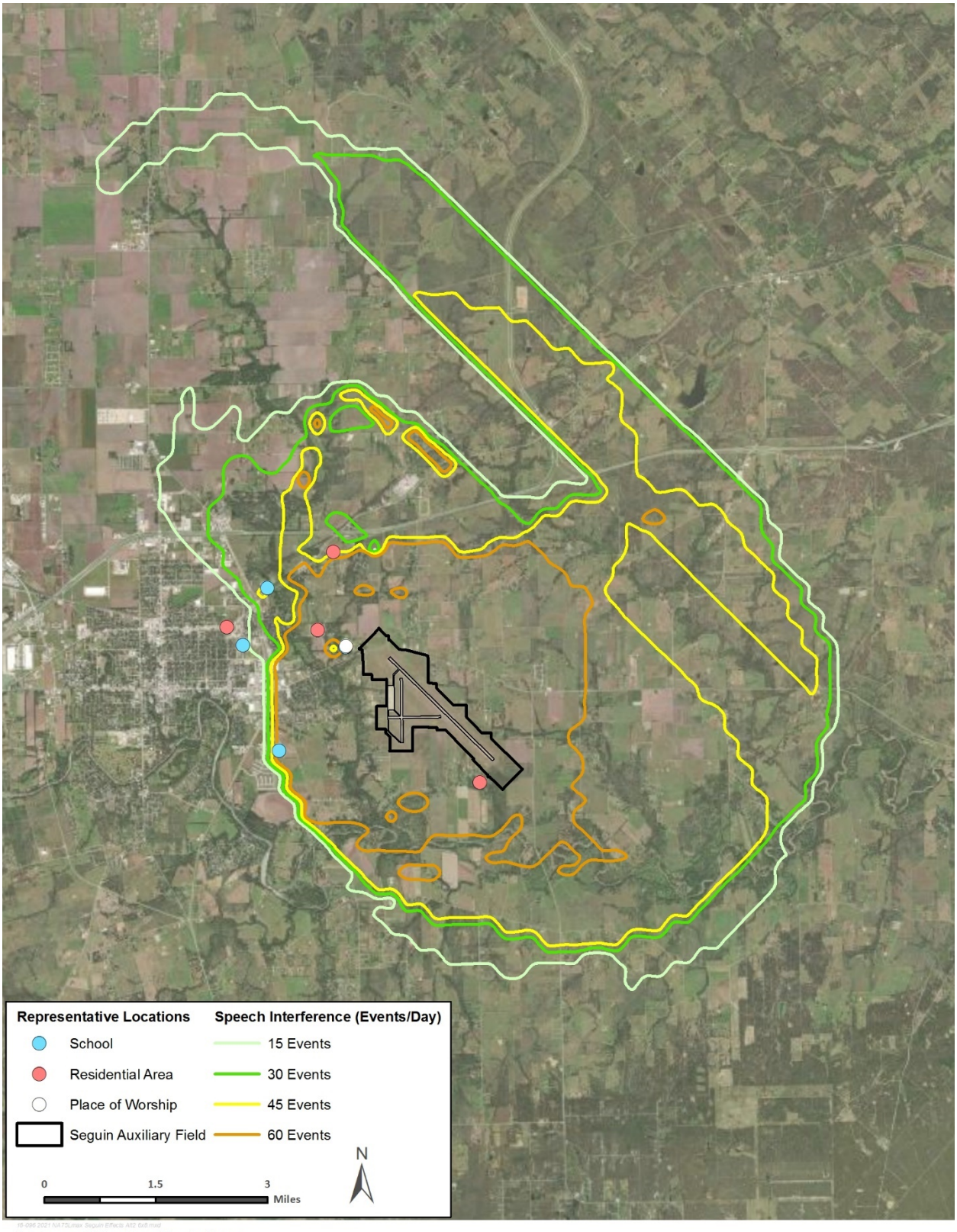
Sources: DAF 2020 and DNWG 2009a

Figure C-22. Classroom Speech Interference Events at Seguin AAF – Proposed Action



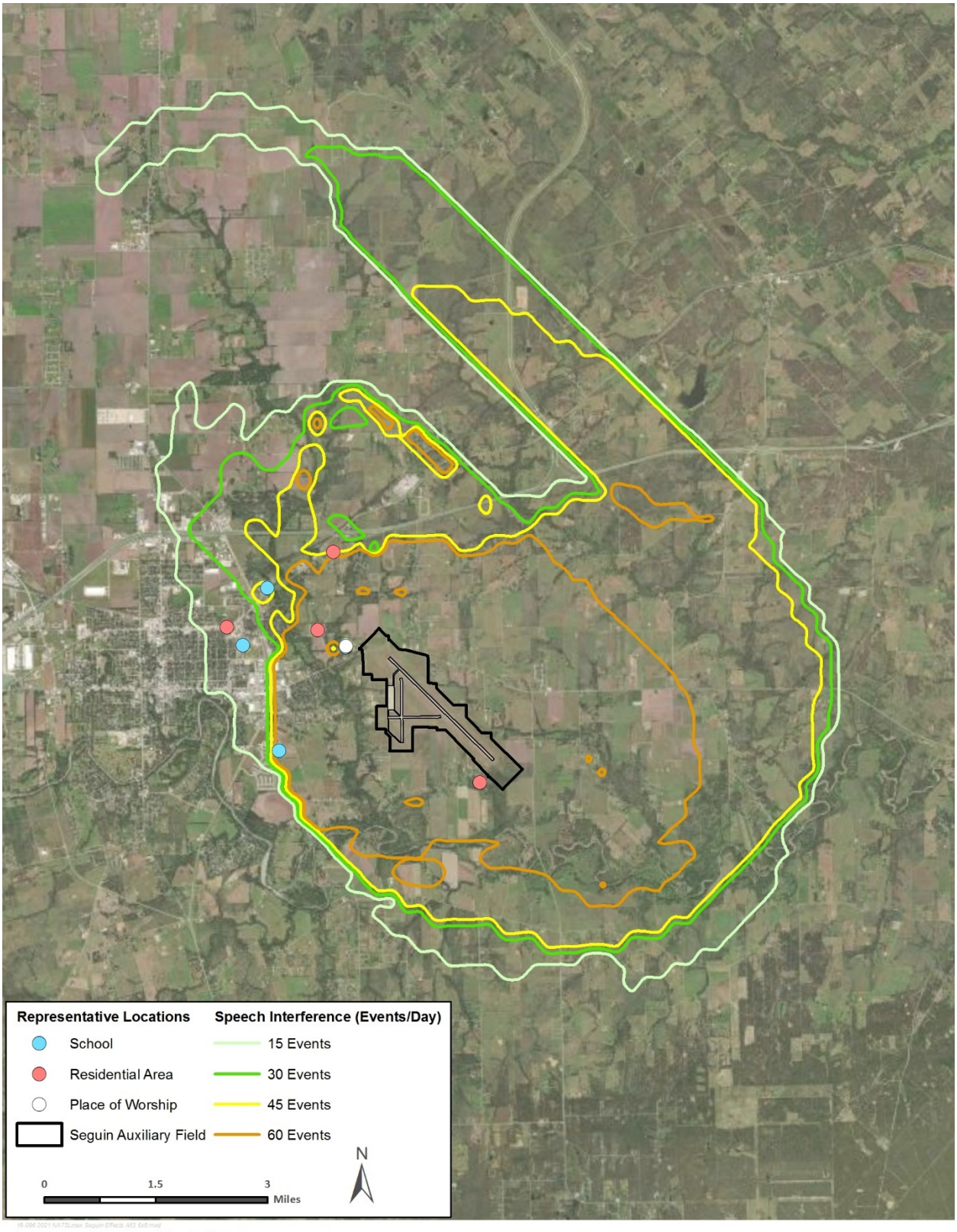
Sources: DAF 2020 and DNWG 2009a

Figure C-23. Classroom Speech Interference Events at Seguin AAF – Alternative 1



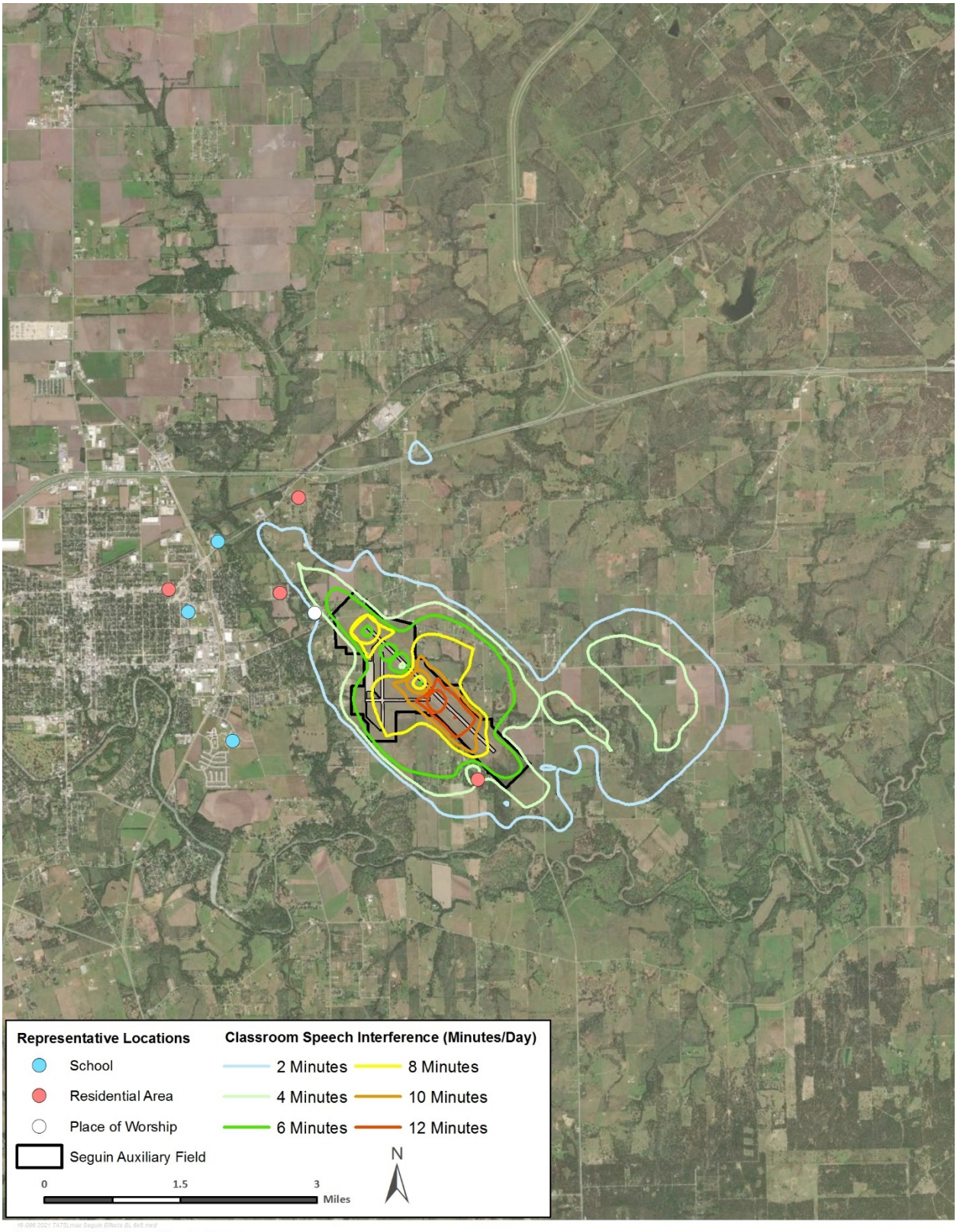
Sources: DAF 2020 and DNWG 2009a

Figure C-24. Classroom Speech Interference Events at Seguin AAF – Alternative 2



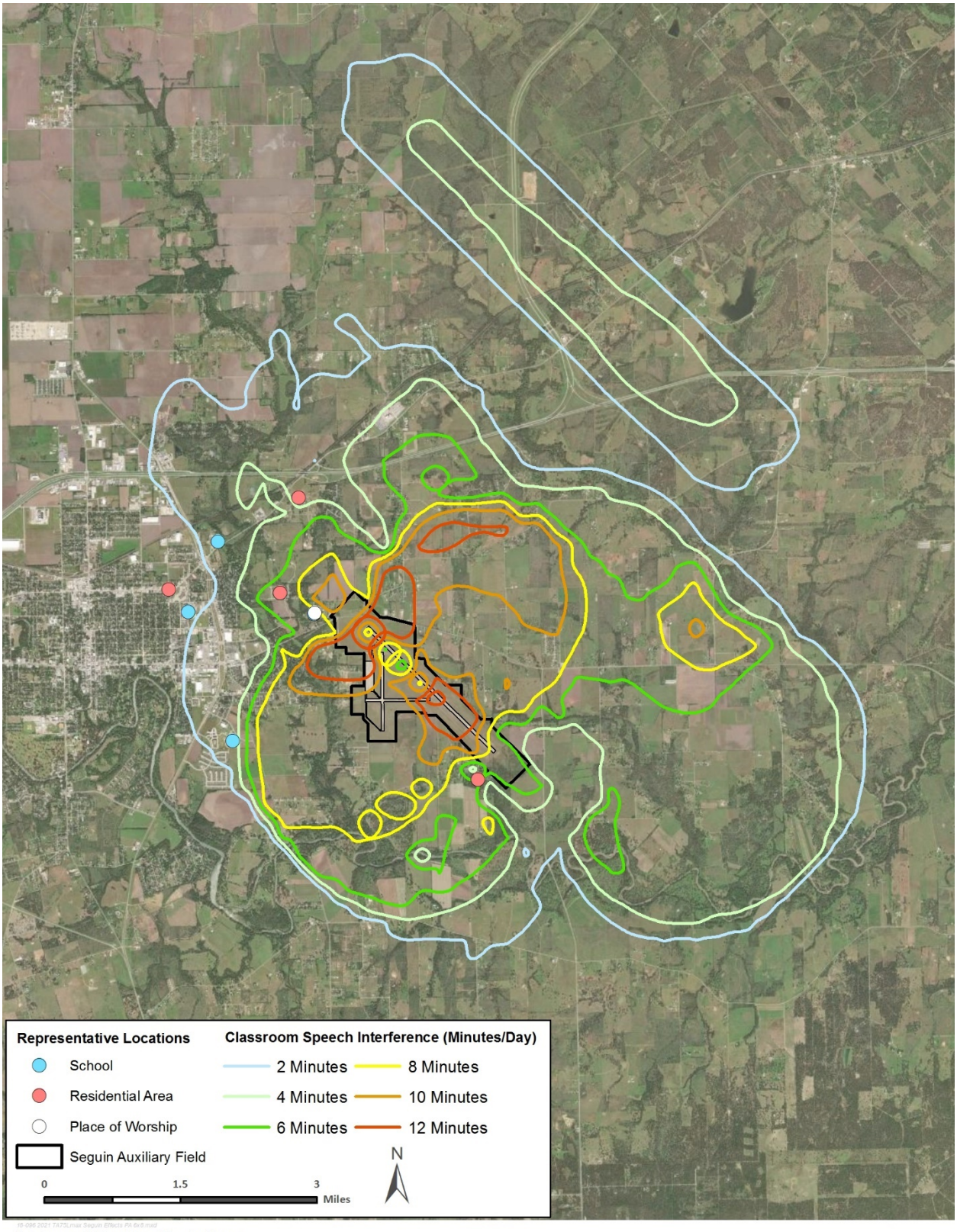
Sources: DAF 2020 and DNWG 2009a

Figure C-25. Classroom Speech Interference Events at Seguin AAF – Alternative 3



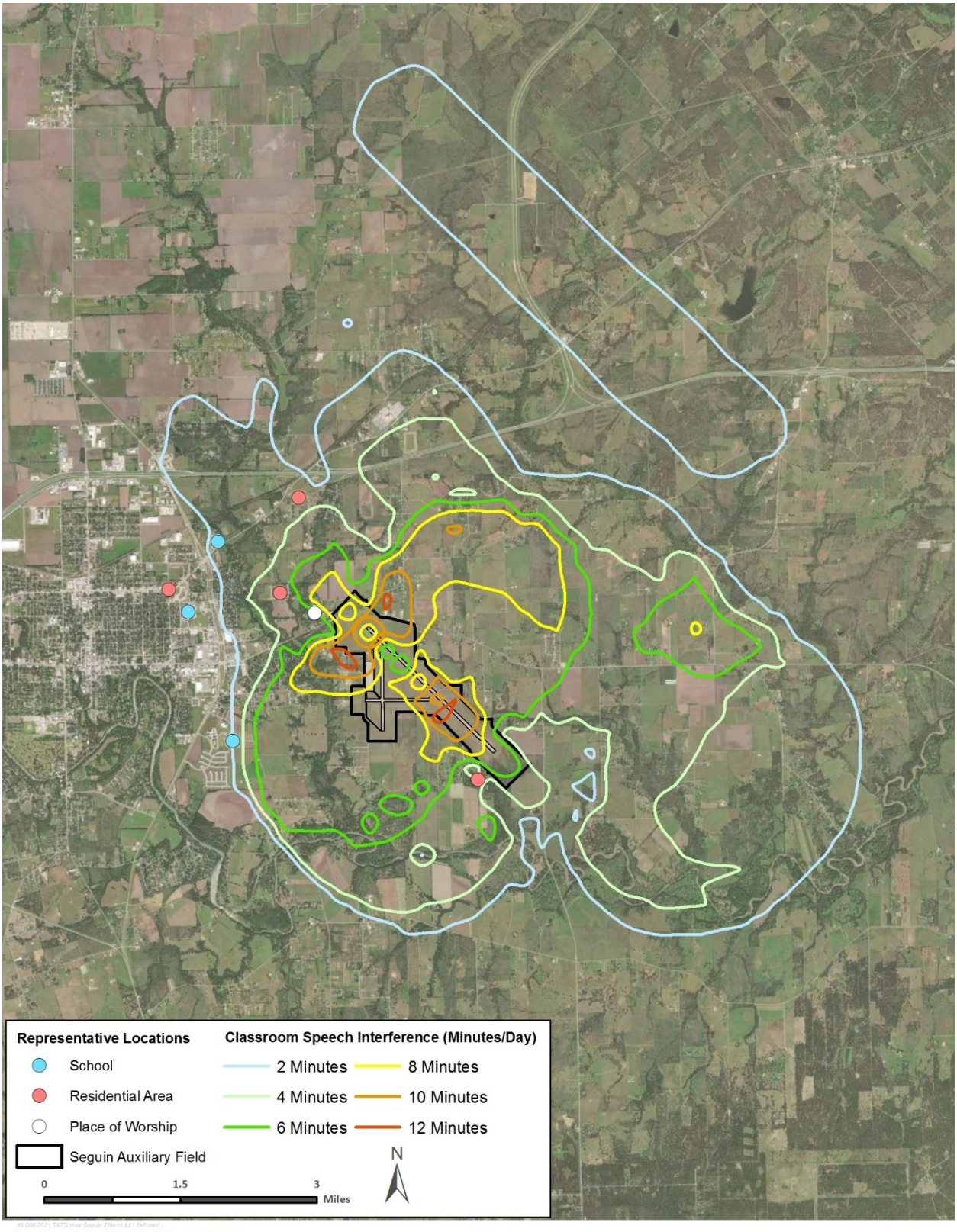
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-26. Classroom Speech Interference Time at Seguin AAF – Existing Conditions



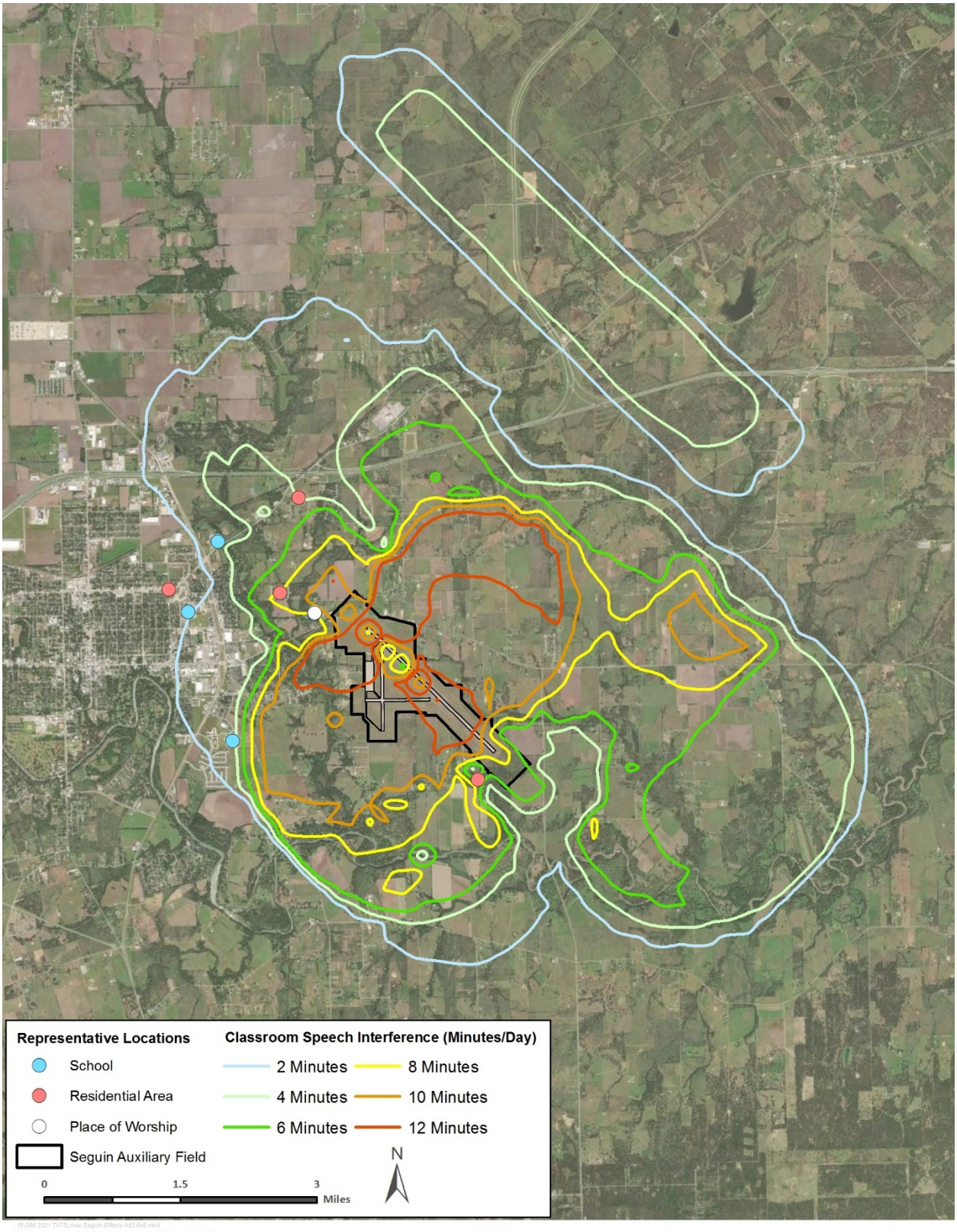
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-27. Classroom Speech Interference Time at Seguin AAF – Proposed Action



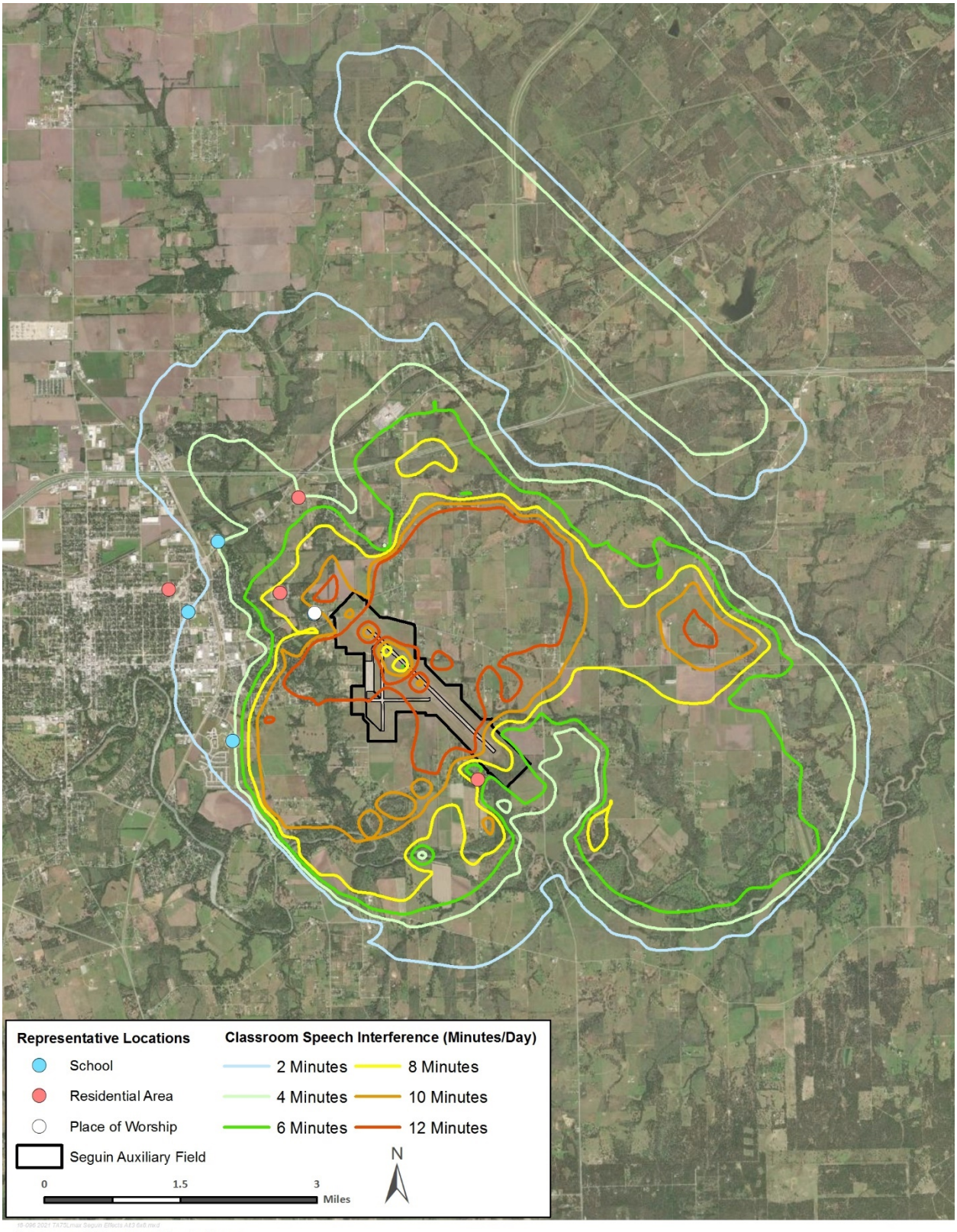
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-28. Classroom Speech Interference Time at Seguin AAF – Alternative 1



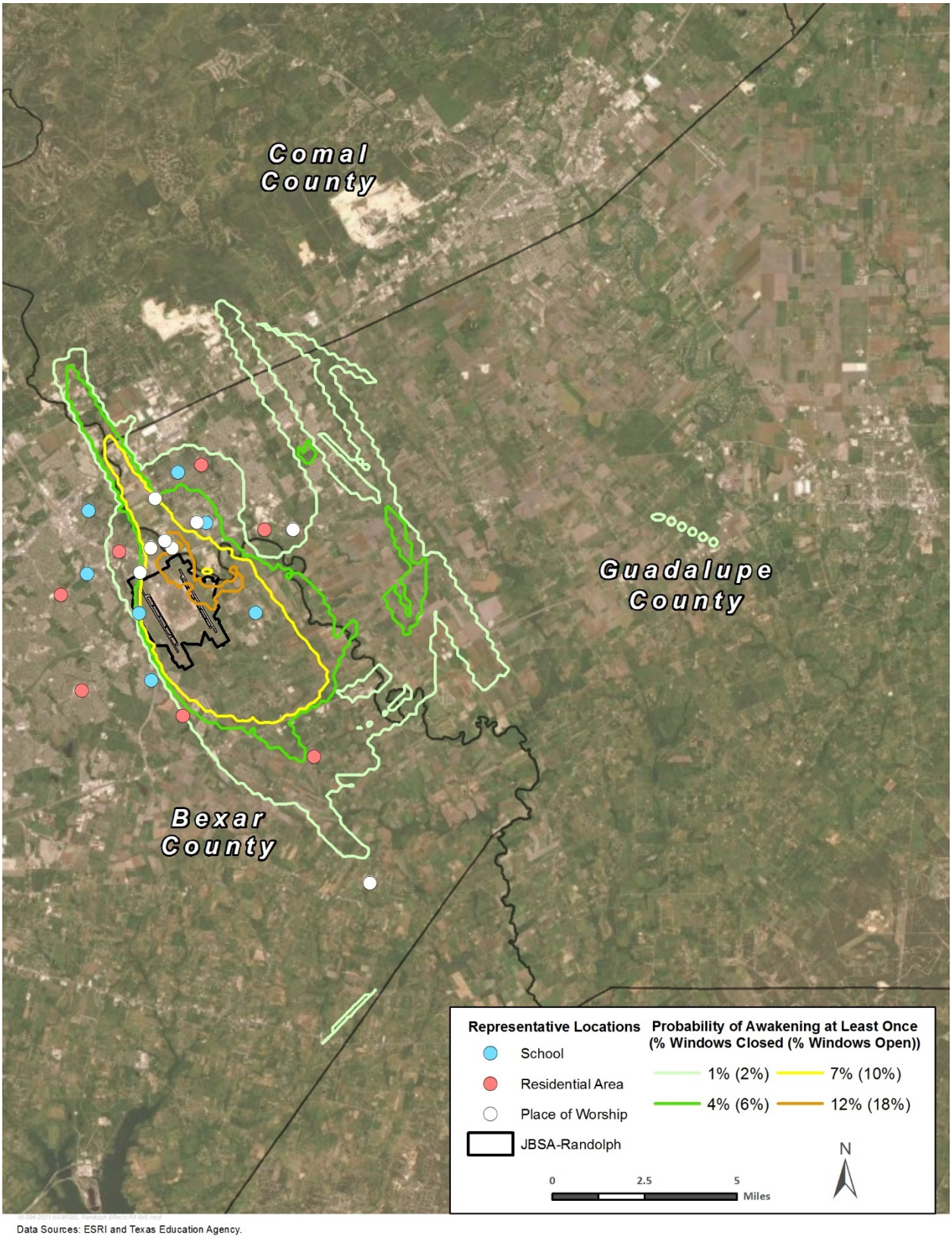
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-29. Classroom Speech Interference Time at Seguin AAF – Alternative 2



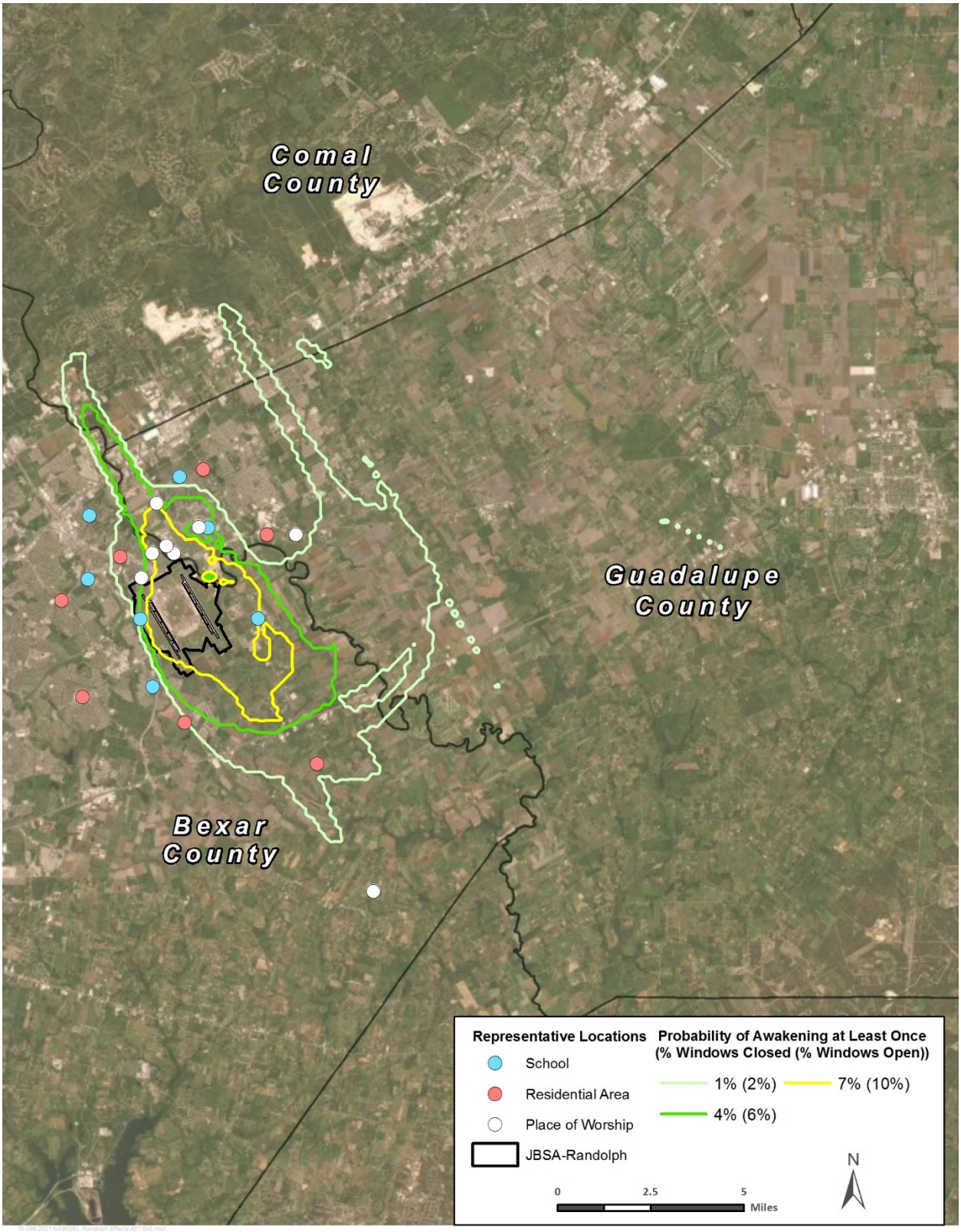
Sources: DAF 2020, ANSI 2008, and DNWG 2009a

Figure C-30. Classroom Speech Interference Time at Seguin AAF – Alternative 3



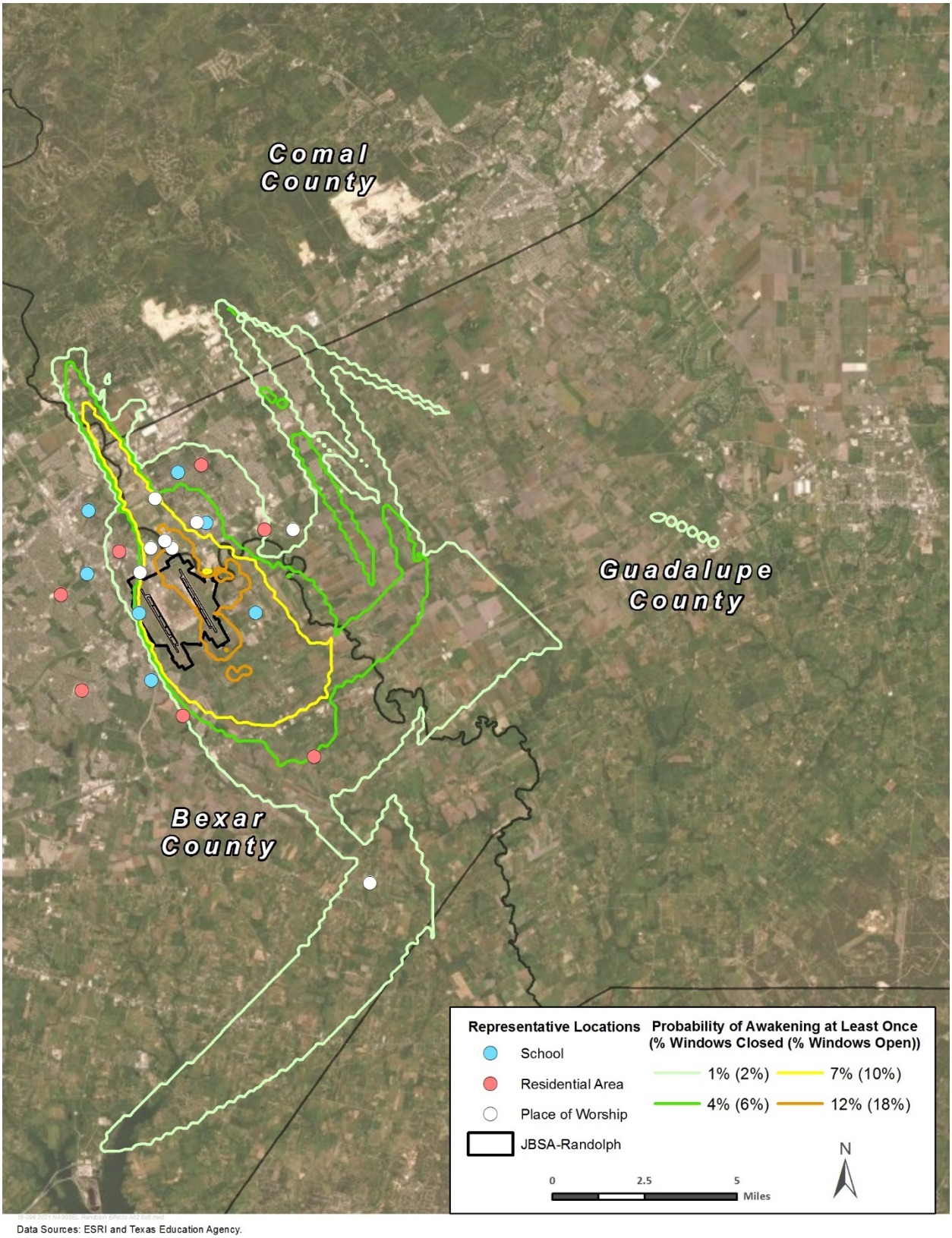
Sources: DAF 2020, DNWG 2009a, DNWG 2009b, and ANSI 2008

Figure C-31. Probability of Sleep Awakening at JBSA-Randolph – Proposed Action



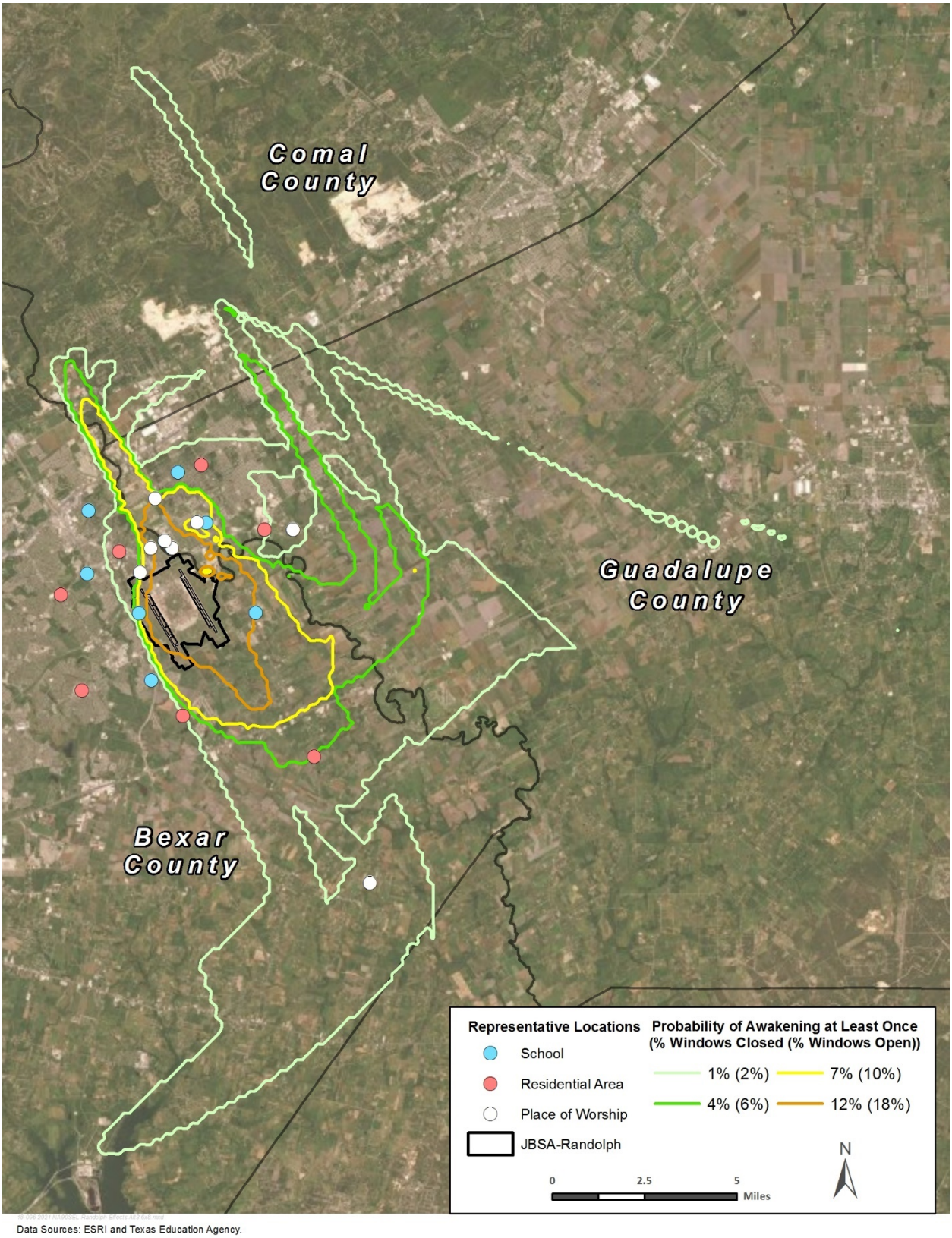
Sources: DAF 2020, DNWG 2009a, DNWG 2009b, and ANSI 2008

Figure C-32. Probability of Sleep Awakening at JBSA-Randolph – Alternative 1



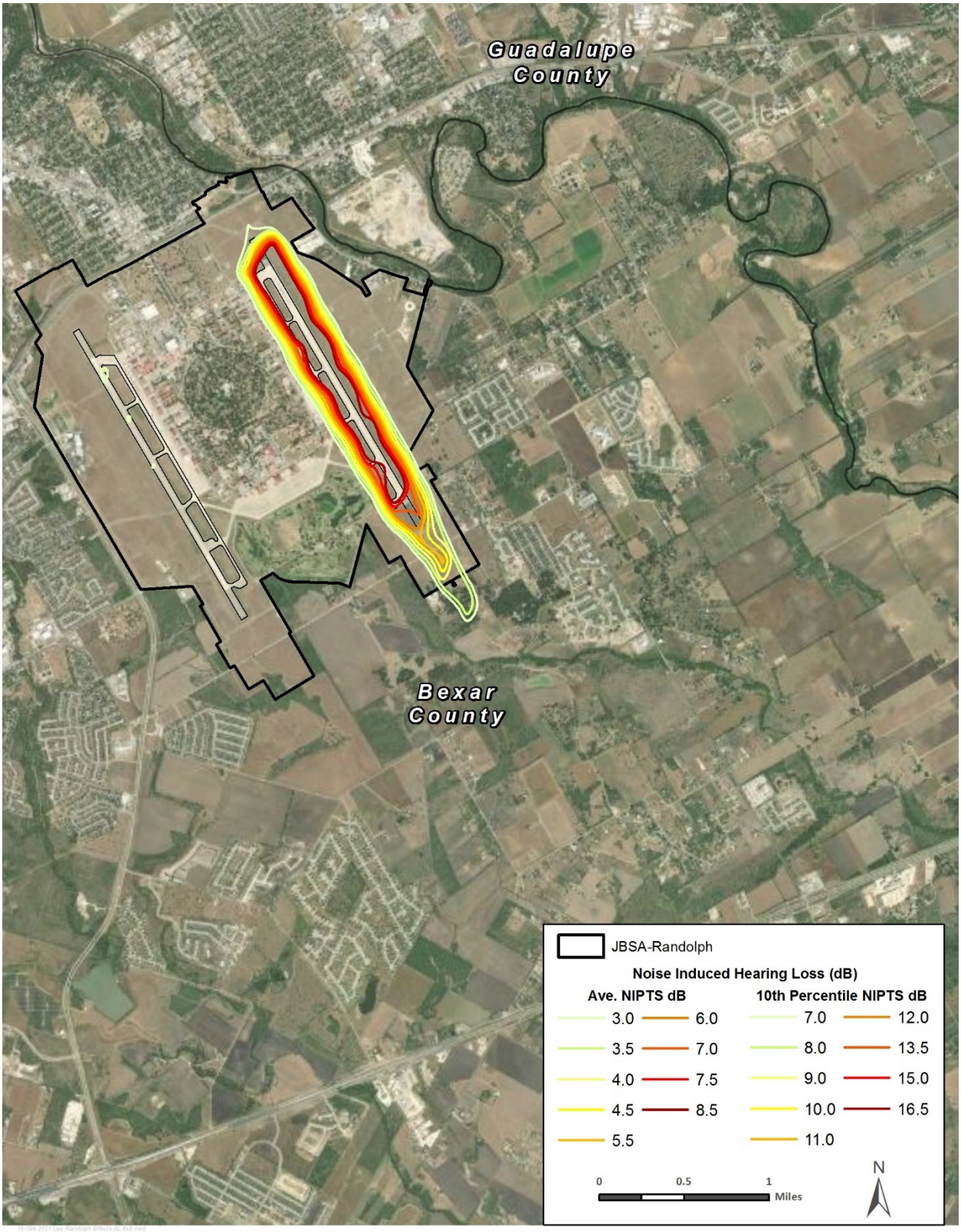
Sources: DAF 2020, DNWG 2009a, DNWG 2009b, and ANSI 2008

Figure C-33. Probability of Sleep Awakening at JBSA-Randolph – Alternative 2



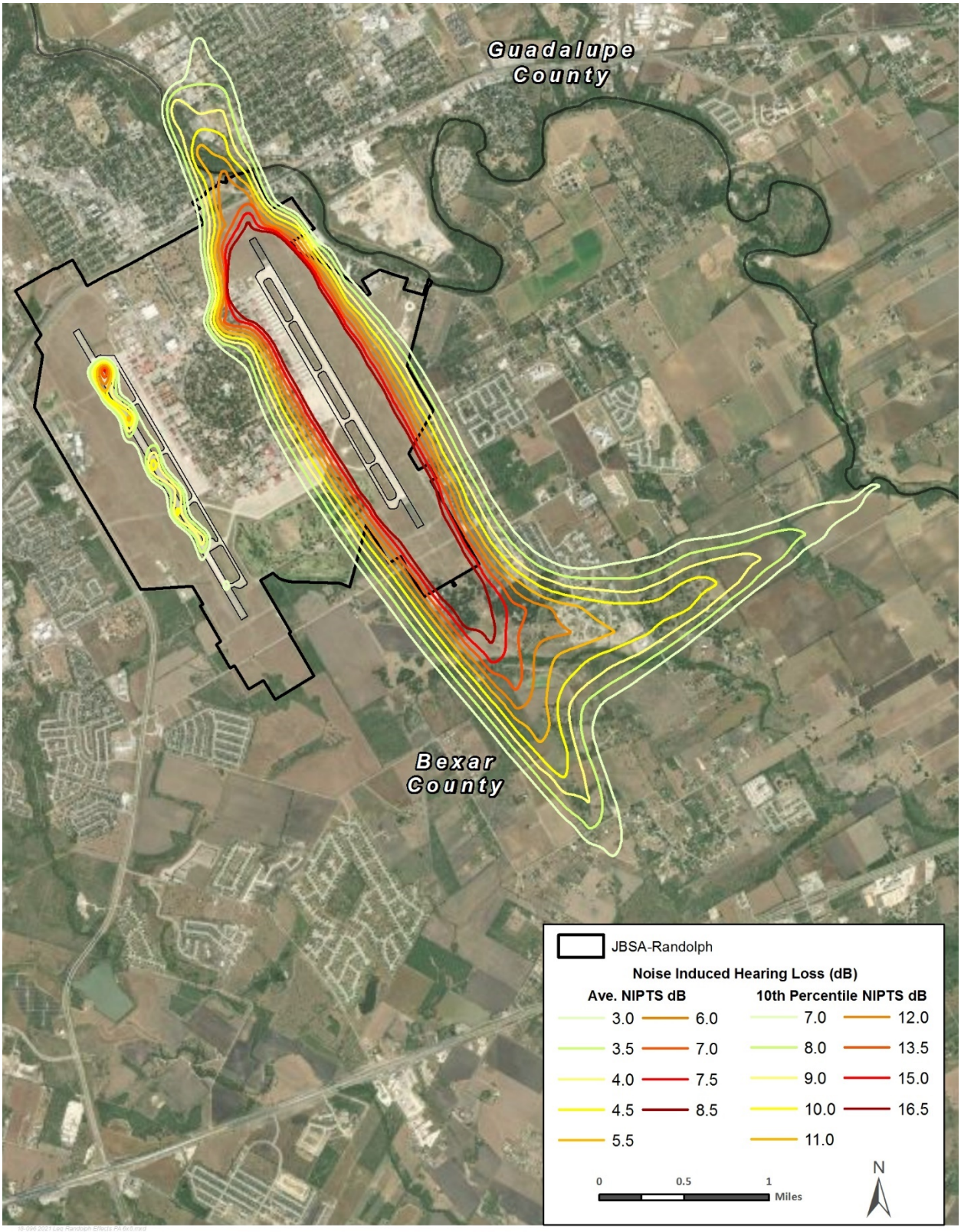
Sources: DAF 2020, DNWG 2009a, DNWG 2009b, and ANSI 2008

Figure C-34. Probability of Sleep Awakening at JBSA-Randolph – Alternative 3



Sources: DAF 2020 and DNWG 2013

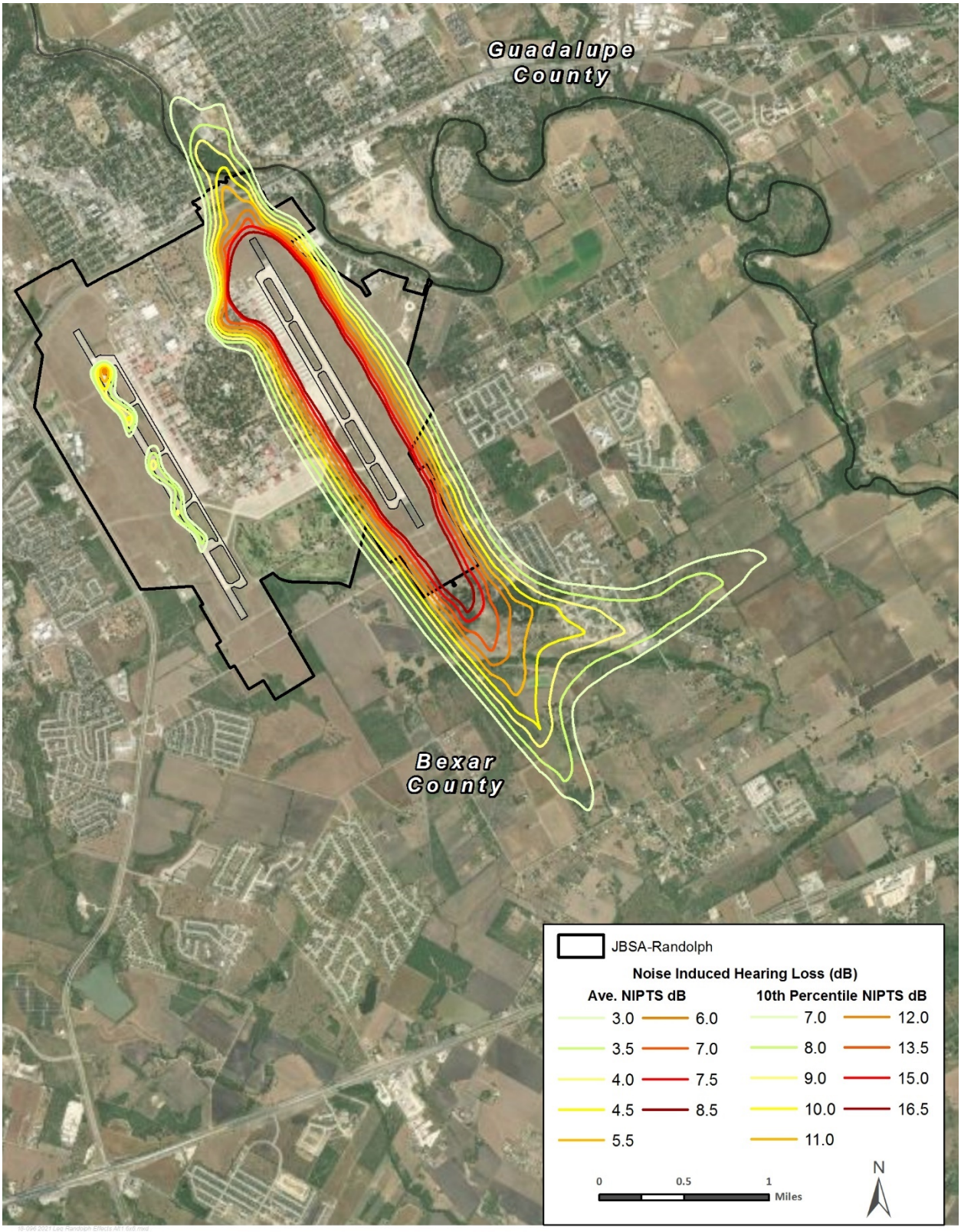
Figure C-35. Noise Induced Hearing Loss at JBSA-Randolph – Existing Conditions



Data Sources: ESRI and Texas Education Agency.

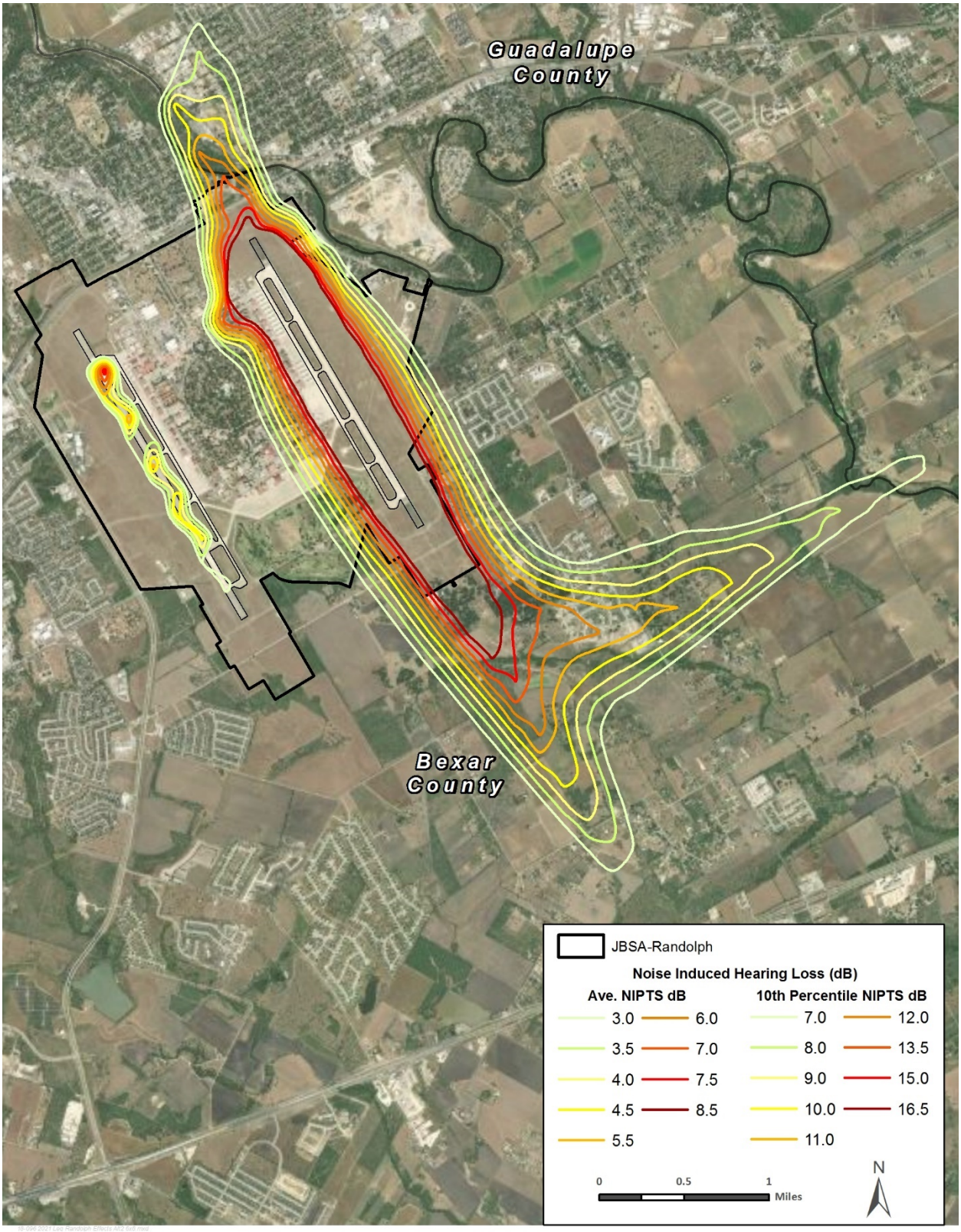
Sources: DAF 2020 and DNWG 2013

Figure C-36. Noise Induced Hearing Loss at JBSA-Randolph – Proposed Action



Sources: DAF 2020 and DNWG 2013

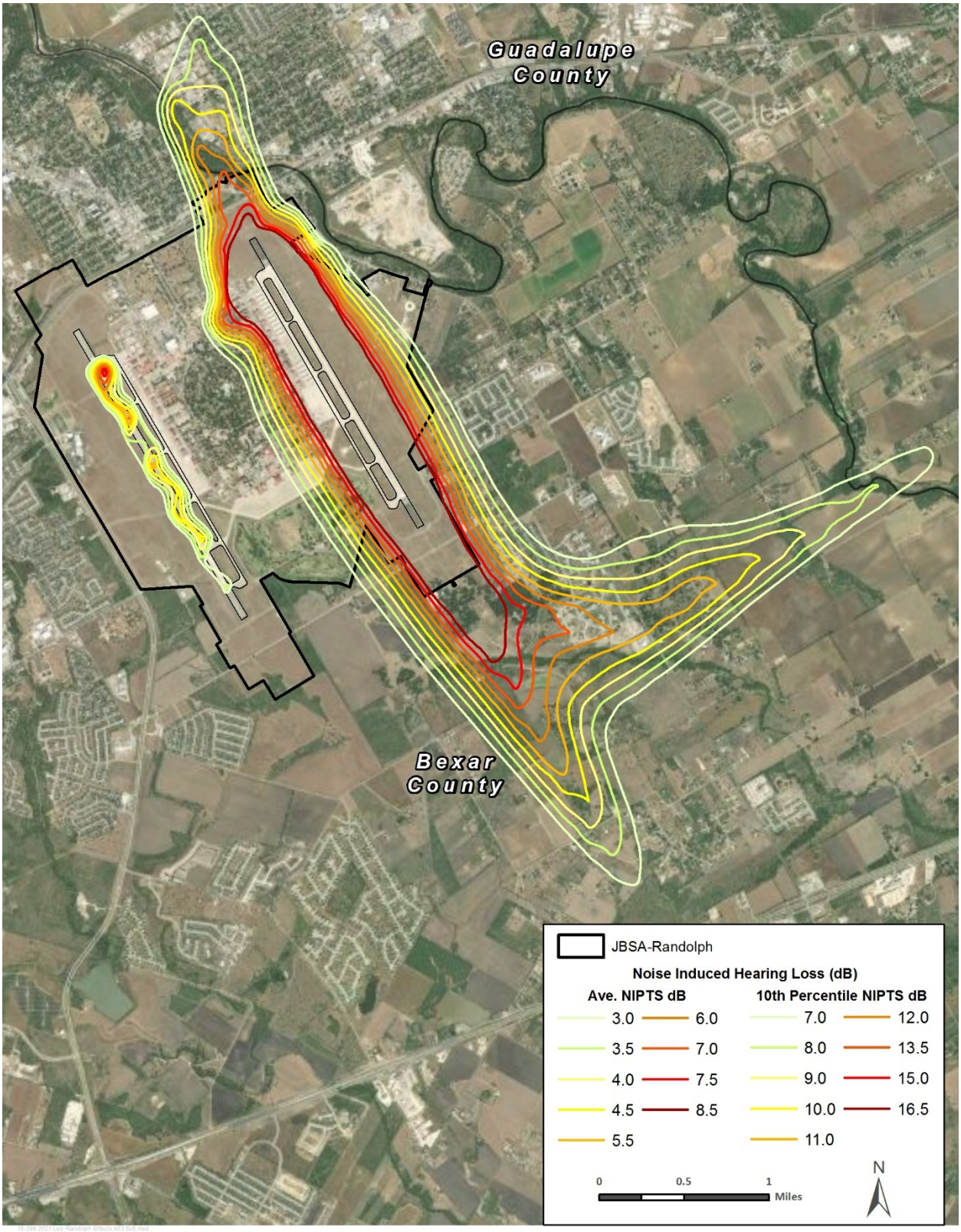
Figure C-37. Noise Induced Hearing Loss at JBSA-Randolph – Alternative 1



Data Sources: ESRI and Texas Education Agency.

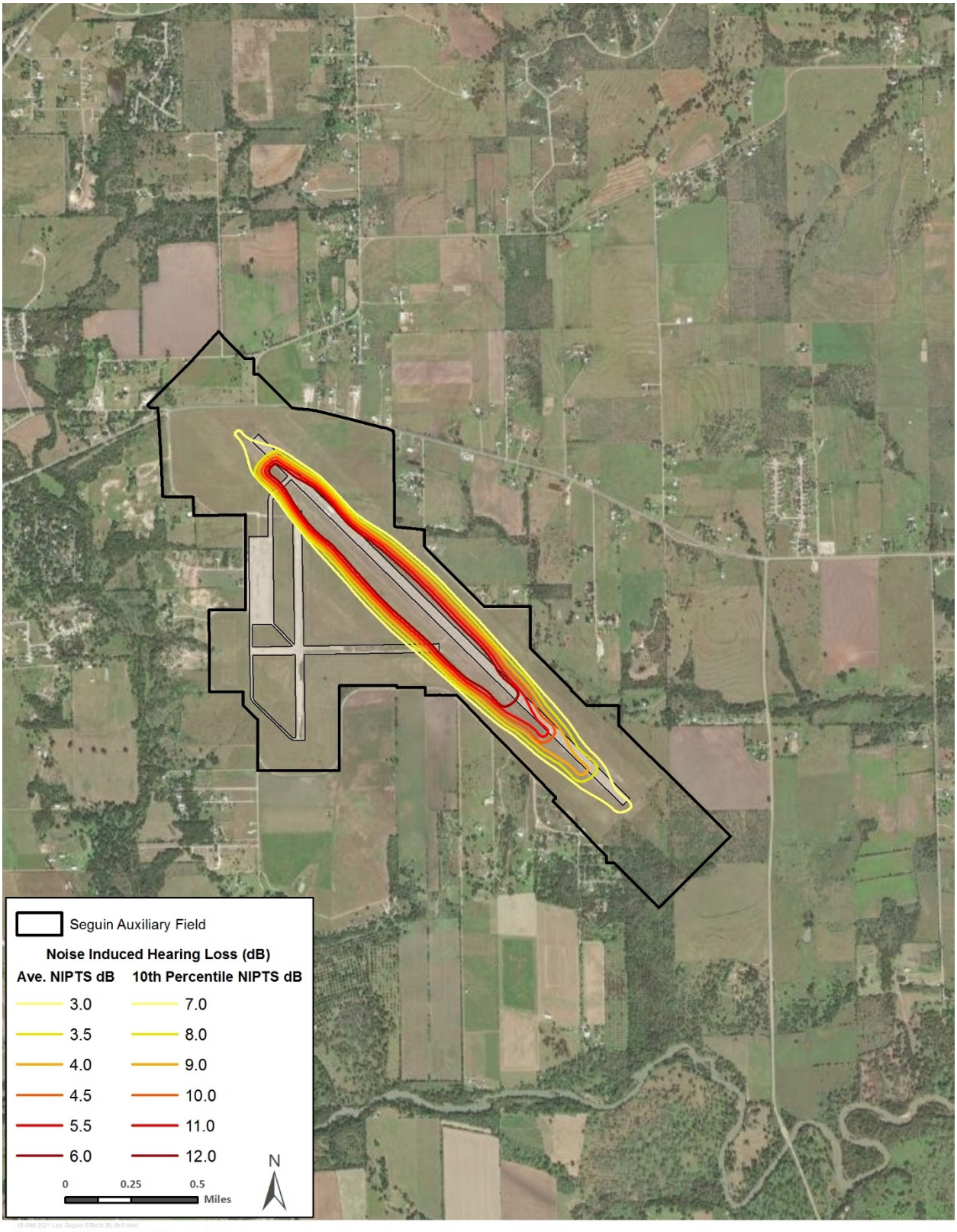
Sources: DAF 2020 and DNWG 2013

Figure C-38. Noise Induced Hearing Loss at JBSA-Randolph – Alternative 2



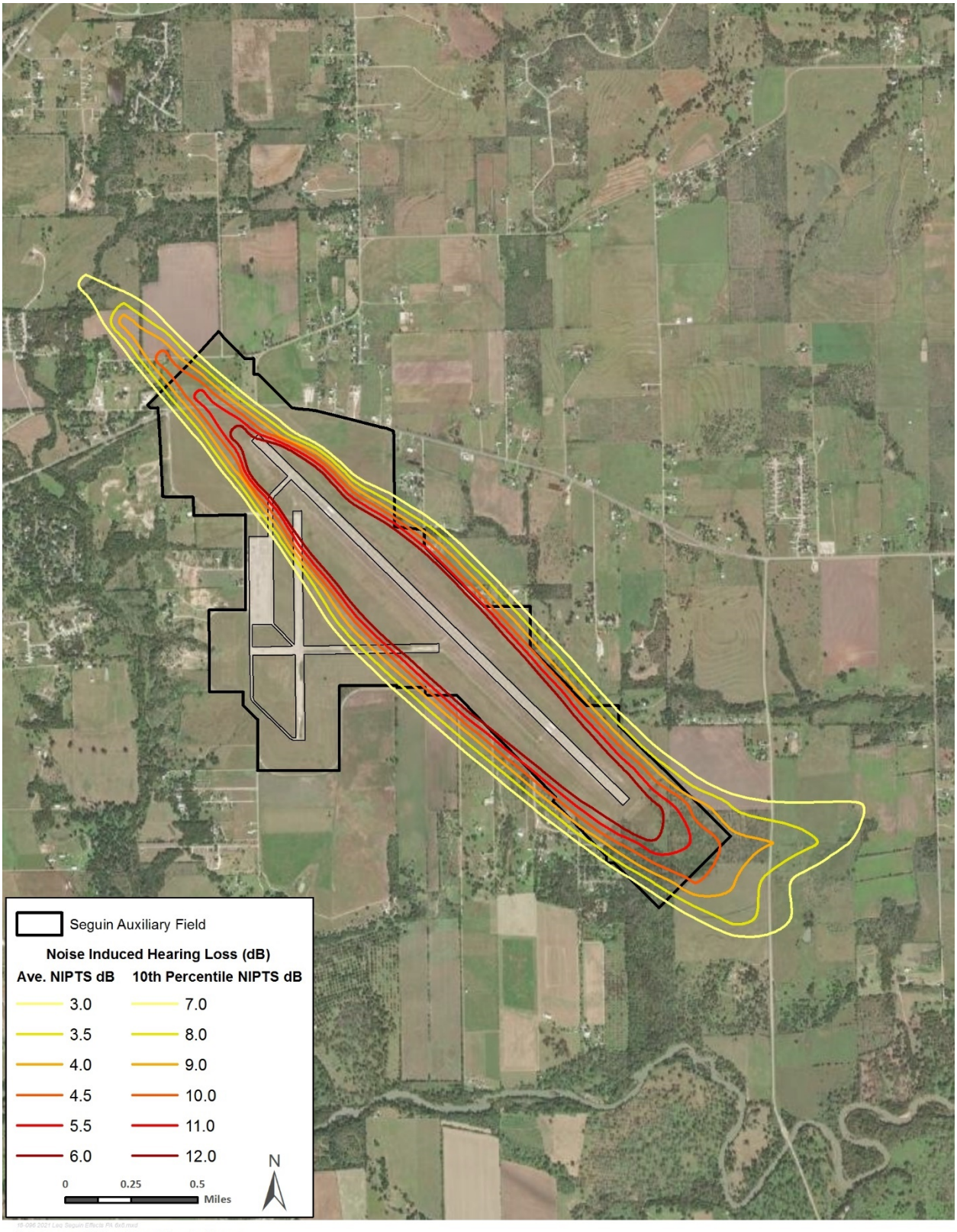
Sources: DAF 2020 and DNWG 2013

Figure C-39. Noise Induced Hearing Loss at JBSA-Randolph – Alternative 3



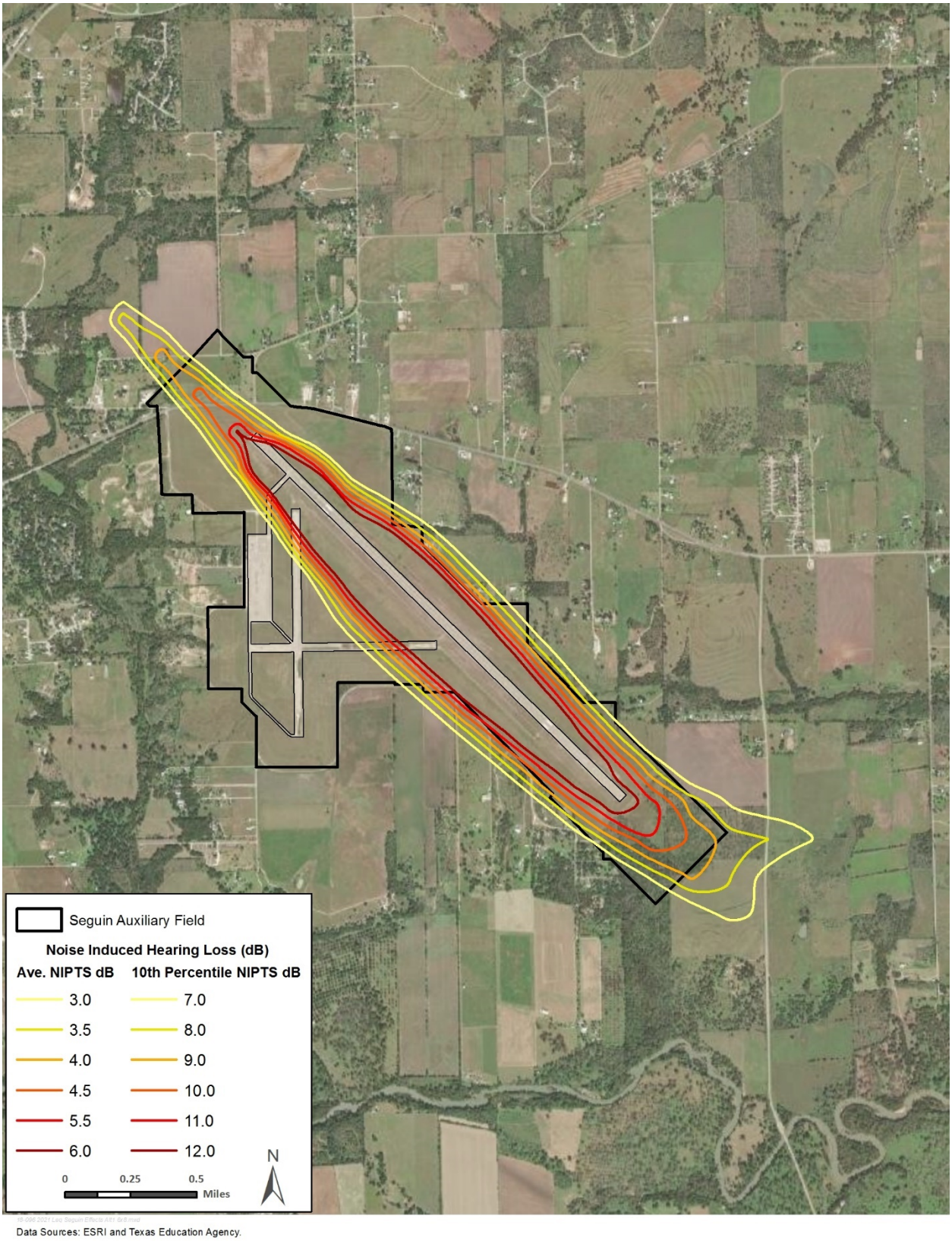
Sources: DAF 2020 and DNWG 2013

Figure C-40. Noise Induced Hearing Loss at Seguin AAF – Existing Conditions



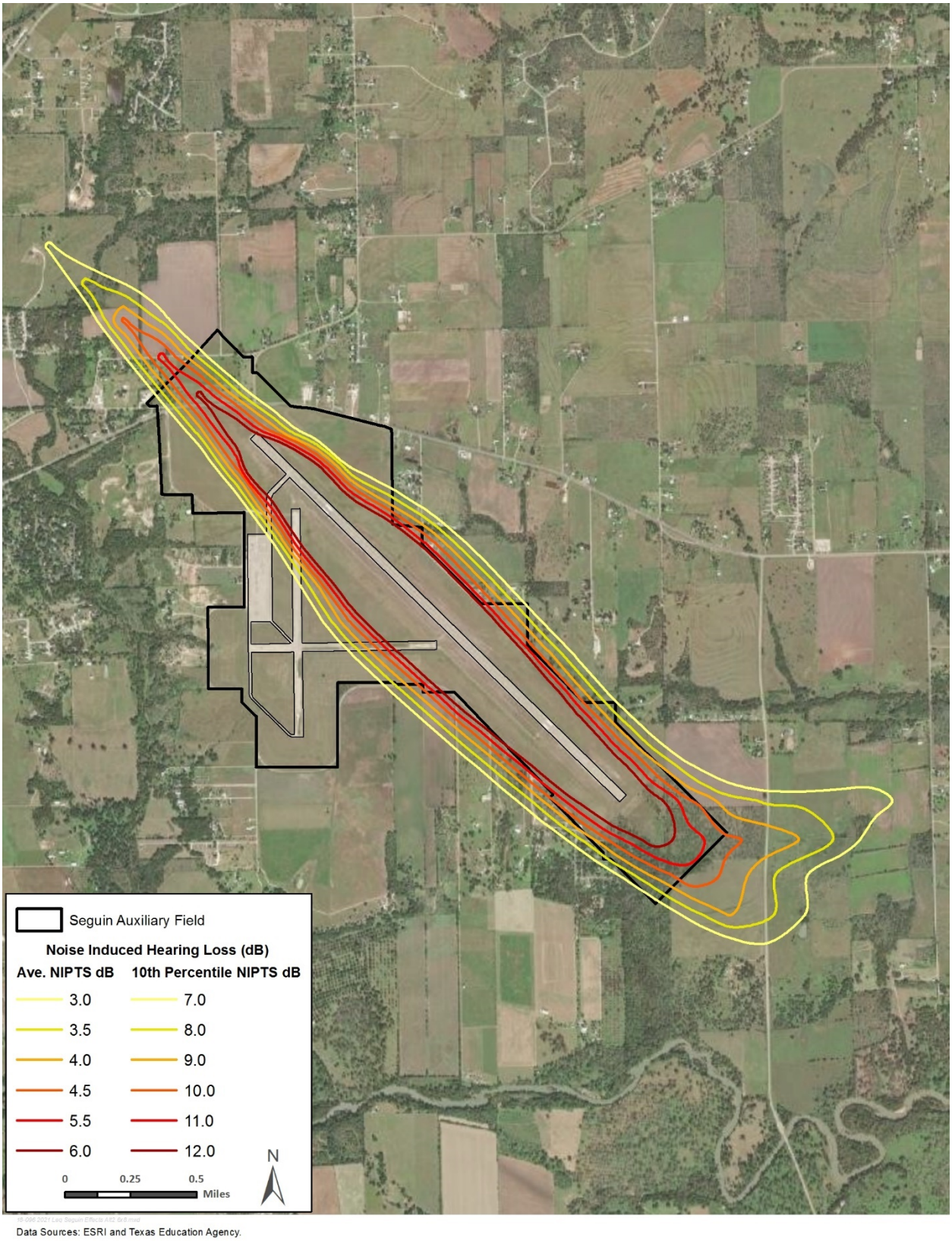
Sources: DAF 2020 and DNWG 2013

Figure C-41. Noise Induced Hearing Loss at Seguin AAF – Proposed Action



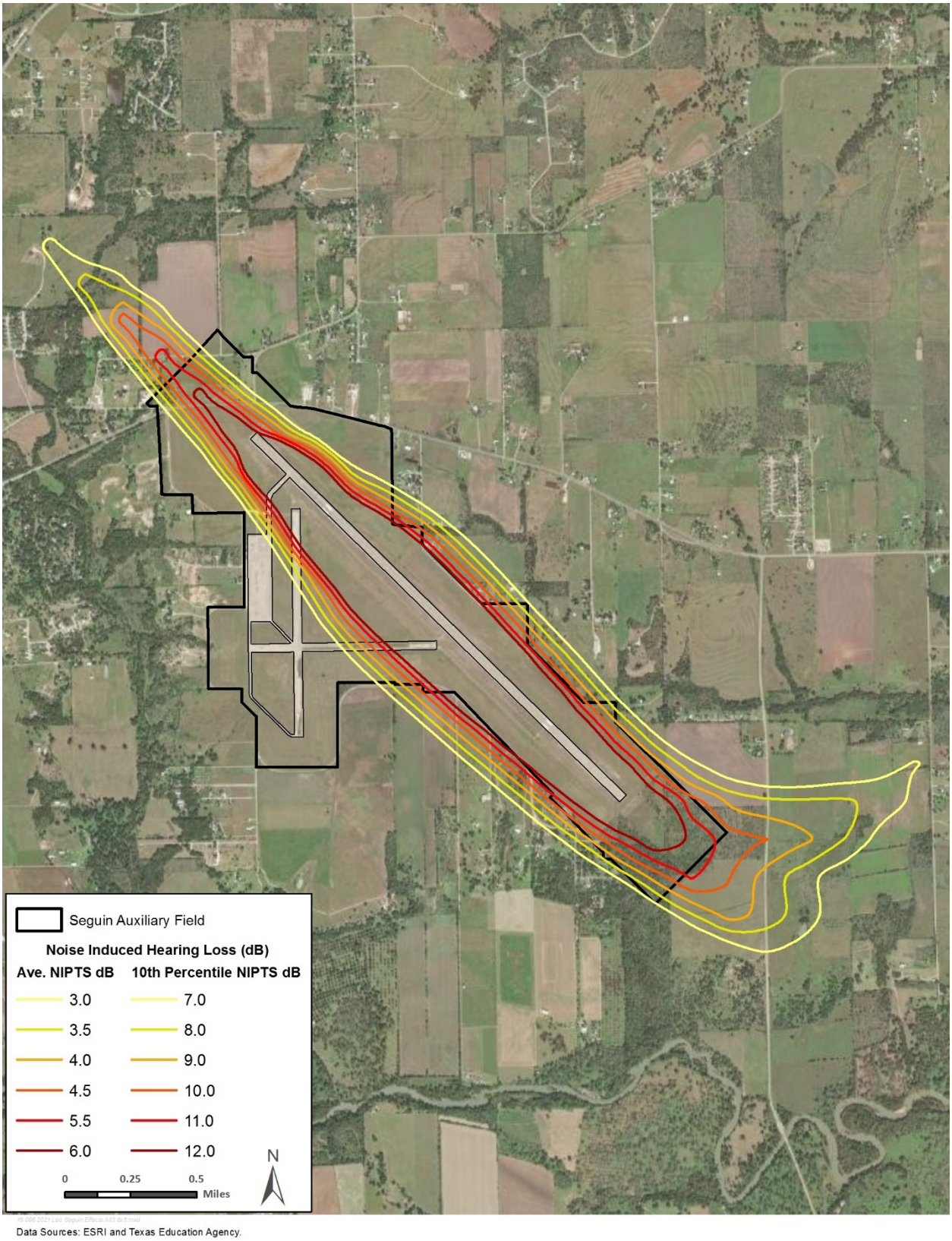
Sources: DAF 2020 and DNWG 2013

Figure C-42. Noise Induced Hearing Loss at Seguin AAF – Alternative 1



Sources: DAF 2020 and DNWG 2013

Figure C-43. Noise Induced Hearing Loss at Seguin AAF – Alternative 2



Sources: DAF 2020 and DNWG 2013

Figure C-44. Noise Induced Hearing Loss at Seguin AAF – Alternative 3

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Appendix D

Aircraft Noise Mitigation and Adaptive Management for Emissions and Noise

D-1. Aircraft Noise Mitigation

1.0 Introduction

This appendix provides an overview of the current noise-mitigation measures being evaluated for potential future implementation at the JBSA-Randolph and Seguin AAF. The DAF takes a proactive approach to noise mitigation and addressing community concerns.

It is the JBSA-Randolph intent to conduct training flights while controlling noise impacts as practicable on surrounding communities. Aircrews using JBSA-Randolph and Seguin AAF are responsible for conducting their mission safely and complying with the published 560th FTS In-Flight Guide, established noise-abatement procedures, and good common sense. Each aircrew is expected to minimize noise impacts without compromising operational and safety requirements.

Recognizing that airfield operations can be loud, the DAF considers some voluntary operational measures on a case-by-case basis, ot interfering with the mission of the base. The DAF may encounter a need for surge operations to train pilots and meet national defense requirements.

JBSA-Randolph and Seguin AAF have noise-abatement procedures to minimize aircraft noise. Airfield procedures used to minimize or abate noise optimize flight tracks and runway usage, restrict maintenance run-up hours, and other procedures.

Noise contours result from industry-accepted use of the NOISEMAP model to predict the levels of noise that will be experienced due to the expected level of training operations. The T-7A aircraft use a single General Electric F404 (variant) engine as its power plant. This engine is very different from the T-38 C aircraft that uses two General Electric J85 engines. The GE F404 generates a much greater amount of thrust and results in a louder “footprint” which is referred to as the noise contours. This more powerful aircraft has been developed to train pilots and more easily allow them to transition to 4th and 5th generation aircraft such as the F-22 and F-35. Because of the projected enlarged noise contours discussed in **Section 3.2** of the EIS, this appendix has been created to examine how DAF can mitigate the predicted aircraft noise impact within the community.

2.0 Overview of Encroachment and Potential Noise Minimization

Careful consideration is required in attempting to harmonize both noise mitigation measures and operational requirements because the environmental noise burden placed on the communities varies greatly based on distance from JBSA-Randolph and Seguin AAF and proximity to flight tracks to and from those airfields. This balancing must account for the fact that changes in flight operations that attempt to reduce aircraft noise on one area of the community often increase aircraft noise on others.

Elements of a balanced approach to noise minimization and mitigation are listed below (broadly, from general to specific) under the following categories:

- Limiting Noise

- Land-use Planning and Management
- Noise Abatement Procedures.

2.1 Limiting Noise

One of the most effective methods of noise mitigation is limiting noise generation at the source. This is particularly relevant to aircraft noise because there are no barriers to decrease the amplitude of the sound energy from aircraft flying overhead. Limiting aircraft noise at the source while maintaining aircraft performance has historically presented technological challenges. As noted below, while research into different noise abatement technologies continues, there are presently no viable technologies resulting in meaningful noise reductions without significant impacts on aircraft performance.

2.1.1 Engine and Aircraft Performance

Over the years, commercial aircraft have benefited from fuel economy and noise reduction technology while supporting an affordable commercial air travel industry. However, for military aircraft, maximizing aircraft performance is critical in ensuring survivability in the modern battlefield against competing military aircraft and other threats, such as anti-aircraft defense systems. Thus, the competing interests of engine performance (i.e., thrust and speed), aircraft capabilities (i.e., maneuverability, agility, and range), fuel economy, and air emission reductions have a limiting effect on the ability to design a quieter aircraft that meets the military mission requirements.

2.1.2 Construction and Operation of Noise-Suppression Facilities (Hush House)

The construction and operation of hush houses should be considered a noise mitigation measure to reduce maintenance noise within airfield environs. The purpose of a hush house is to reduce the sound levels associated with high-power jet-engine maintenance testing. Hush house noise reduction for similar jet engines is approximately 10 to 20 A-weighted decibels (dBA). The “A” weighting is important because a hush house primarily works by transferring the acoustic energy into frequencies below 100 Hertz (Hz). Exact specifications of the proposed JBSA-Randolph hush house are unknown at this time but are anticipated to be similar to those of other hush houses currently operated by the Department of Defense (DoD) at other installations.

2.1.3 Ground Operations and Aircraft Maintenance

Airfield ground operations and aircraft maintenance can also create a noise disturbance to surrounding communities. The sources of ground noise include engine testing and run-up prior to taxiing, noise from aircraft on apron and terminal stands, and aircraft maintenance facilities such as hangars and engine test stands. The T-7A aircraft maintenance only occurs at JBSA-Randolph, not at Seguin AAF.

Methods of controlling the noise from these operations may include the proper orientation of aircraft for run-up procedures, relocating the aircraft away from noise-sensitive areas, and the use of suppressors and barriers (jet blast deflectors, blast screens, blast fences, and ground ru-up enclosures like hush houses). JBSA-Randolph can also use time-based restrictions.

2.2 Land Use Planning and Management

Beyond those policies, programs, and procedures mentioned above, others are available to assist local communities in mitigating potential for existing and future noise impacts from aircraft activities at JBSA-Randolph and Seguin AAF. Generally, minimizing impacts from noise generated by military airfield activities requires comprehensive land use planning that provides adequate spatial separation between noise sources and noise-sensitive areas. Where noise problems occur around an existing airfield, or where spatial separation cannot be used to affect a satisfactory solution, other land use management options can be employed by the installation and the local community, such as those described below. In addition, the DAF will support local government efforts to apply for U.S. Department of Defense Office of Local Defense Community Cooperation programs, if local governments qualify for the offered programs.

2.2.1 Air Installations Compatible Use Zones Program

The DoD initiated the Air Installations Compatible Use Zones (AICUZ) program in the 1970s to protect the public's health, safety, and welfare and to prevent encroachment from degrading the operational capability of military air installations in meeting national security needs. The DoD recognizes that local municipalities have the authority necessary to protect the public health, safety, and welfare through implementation of compatible land use controls (i.e., zoning ordinances, building codes, subdivision regulations, use permits, noise disclosure statements, and public land acquisition). Therefore, the AICUZ program requires military installations to work collaboratively with federal, state, and local agencies and community leaders to encourage compatible development of land adjacent to military airfields. The DAF implements the DoD AICUZ Program at DAF installations through the guidance published in Air Force Instruction (AFI) 32-1015 Integrated Installation Planning and Air Force Handbook 32-7084 AICUZ Program Manager's Guide. To implement the AICUZ program, the installation is required to:

- Prepare periodic AICUZ updates to quantify aircraft noise zones and accident potential areas and provide compatible land use recommendations to local municipalities.
- Develop a prospective long-term (5 to 10 years) analysis and develop a strategy to promote compatible development in the community to address future changes.
- Coordinate with federal, state, and local agencies and community leaders in order to maintain public awareness of the AICUZ program.
- Promote encroachment partnering projects in order to achieve long-term encroachment protection.

JBSA-Randolph has an active AICUZ program that informs the public about its aircraft noise environment and recommends specific actions for the local jurisdictions with planning and zoning authority that can enhance the health, safety, and welfare of those living near JBSA-Randolph and Seguin AAF. The current version of the AICUZ plan for JBSA-Randolph was published in 2017, and provides the most current noise contours and their relation to recommended compatible land use for noise zones. The 2017 AICUZ Update for JBSA-Randolph is used by Bexar and Guadalupe Counties to guide their current land-use management practices.

The T-7A recapitalization at JBSA-Randolph changes to day-night average sound level (DNL) noise contours and noise exposure, would result in an update to the base AICUZ and changes to land use recommendations. DAF will continue to work with Bexar and Guadalupe Counties, the City of Schertz, Universal City, Seguin, and other communities as needed to plan for compatible development, land use zoning, and building construction standards. The DAF anticipates pursuing the following five measures:

1. Collecting and providing performance data for the T-7A training operations specifically performed at JBSA-Randolph and Seguin AAF. See **Section D-2** of this Appendix for more information on incomplete data and DAF commitments.
2. Preparing an AICUZ update to address any increases of land area within the greater than 65 dB DNL noise contours for both JBSA-Randolph and Seguin AAF once the T-7A aircraft have been delivered and are operational.
3. Coordinating with state and local agencies on compatible land use and potential encroachment concerns inside and outside of the DNL footprint (i.e., large-scale developments, transportation projects that could encourage development, or tall structures such as cell towers that could penetrate airfield imaginary surfaces[1]
4. Encouraging municipalities to promote the highest and best use of land by updating local zoning ordinances and building construction standards to require noise attenuation in structures, especially for high-noise areas.
5. Encouraging municipalities to adopt legislative initiatives to acquire interest in developed properties in order to curb and mitigate encroachment near military installations and to protect the public from noise exposure and accident potential.
6. Supporting any comprehensives community planning efforts, such as proposing an update of the Joint Land Use Study (now Compatible Use Plan [CUP]) funded by the DoD Office of Local Defense Community Cooperation (OLDCC).

2.2.2 Encroachment Partnering Efforts

In addition to the current AICUZ program and local planning and management guidelines, other noise-mitigation options involving local partnerships are available. The DoD's Readiness and Environmental Protection Integration (REPI) program, as well as CUPs, acquisition programs, and roll-back incentives, are encroachment partnering tools discussed below for further mitigation consideration.

1. ***Readiness and Environmental Protection Integration.*** The DoD's REPI program is a key tool for avoiding the installation encroachment that can limit or restrict military training, testing, and operations. The REPI program protects these military missions by helping remove or avoid land-use conflicts near installations and addressing regulatory restrictions that inhibit military activities. The REPI program is administered by the Office of the Secretary of Defense (OSD). More information on DoD's REPI program can be viewed online at www.repi.mil.

[1] Imaginary surfaces are three-dimensional areas extending from the runway surface in all directions at various angles and altitudes, which have certain associated height and obstruction criteria in order to provide safe operating areas for aircraft utilizing the runway.

A key component of the REPI program is the use of buffer partnerships among the military services, private conservation groups, and state and local governments, authorized by 10 U.S.C., Section 2684a. These partnerships share the cost of acquisition of conservation easements or other interests in land from willing sellers to preserve compatible land uses and natural habitats near military facilities that help sustain critical military mission capabilities that are at-risk from external encroachment pressures (DoD 2017).

2. ***Compatible Use Plan or Study.*** Whereas an AICUZ study represents the DAF's compatible land use recommendations to the community, a CUP is a community-developed document. The community-led CUP encourages collaborative planning and communication between the installation and affected jurisdictions while encouraging compatible development near military installations as those communities experience growth. Additional land use requirements for compatibility may result from CUP agreements. The CUP is produced in partnership with the DoD OLDCC. A Joint Land Use Study was prepared in July 2015 and must be updated with newly developed AICUZ results.

3. ***Acquisition Programs and Roll-Back Incentives.*** As stated above, the civilian-military land use study provides recommendations to improve compatible land use planning through partnerships, to clarify processes, to amend legislation, and to allocate funds (for the resolution of land incompatibility issues, protection of habitat, and conservation of rural areas) (The Spectrum Group, 2016). The state identifies the potential to participate in acquisition programs and roll-back incentives in the future, although these programs are not currently established around JBSA-Randolph. These programs have been implemented successfully in similar situations in other communities with military airfields. For example, a partnership between the Commonwealth of Virginia, the City of Virginia Beach, and the City of Chesapeake has successfully worked to decrease encroachment of incompatible development around NAS Oceana and Naval Auxiliary Landing Field (NALF) Fentress.

   By combining land use controls, an acquisition program, and roll-back incentives, the City of Virginia Beach has achieved a decrease in density and incompatible land uses surrounding NAS Oceana. An Interfacility Traffic Area (ITA) Acquisition Plan has been similarly successful in the City of Virginia Beach. The city's acquisitions, coupled with its other holdings in the ITA, allow the city to control most of the land in the ITA to ensure it is used in a way that is compatible with the mission of NAS Oceana. The city was able to further regulate this area through the creation of the Rural AICUZ Area. The city has continued to incentivize businesses that bring about conformity in APZ-1. The opportunity for development or re-development in APZ-1 is useful for incompatible users, stimulating the conversion of incompatible development surrounding the air station. As every acquisition is evaluated, the city examines ways to merge properties and "roll back" density or incompatibility.

   The City of Chesapeake, Virginia has also made its own commitments in order to protect NALF Fentress and has documented significant legislative changes to prevent future encroachment. Planning policy in the City of Chesapeake includes programs for acquisition of conservation easements. An easement purchase is the purchase of a

portion of or all development rights on a property. Compensation is provided to the landowner in exchange for restrictions placed on the land's deed, in perpetuity. This encourages and promotes preservation of open space and agricultural lands throughout the city by means that are voluntary rather than regulatory (EDAW, Inc., et al. 2005).

2.2.3 Publication of AICUZ or JLUS on County/City Website and Real Estate Disclosure – Disclose location of properties in relation to military impacts during the sales process, per Texas State Law requirements.

The Texas Legislature passed House Bill 890 during its 85th Regular Session (amending Section 1, Chapter 397 of the Texas Local Government Code) which implements providing information to the public on the impact of military installations. The legislation requires counties and cities in which a military installation is located to work to ensure the public availability of the most recent AICUZ or JLUS. Also, Section 2 of the bill amended Texas Property Code Section 5.008 to add a Seller's Disclosure Notice if a property may be near a military installation and subject to high noise, APZs, or other operations. Section 2 of the bill only pertains to resale of existing homes and became effective Sept 1, 2017 (Texas Realtors 2017).

2.3 Noise Abatement Operational Procedures

There are several ways to limit aircraft noise by adjusting aircraft operational procedures performed in the area of the installation while meeting the training mission. Operational procedures are changes in the way a specific aircraft flies during a specific activity/operation.

Aircrews follow procedures in the 560th FTS In-Flight Guide to reduce aircraft noise impacts and avoid noise-sensitive areas, except when being vectored by radar air traffic control (ATC) or specifically directed by the control tower. Noise abatement requires knowledge of the In-Flight Guide and proper policies. Course rules and FAA-enforced airspace requirements dictate horizontal and vertical stand-off distances from noise sensitive receptors (like historic/cultural/religious sites, parks, and population centers), minimum altitudes, and maximum speed (typically restrictions on supersonic flight). Flight tracks are designed to minimize overflights of population nodes.

High-power settings and erratic power control are the two variables that have the greatest noise impact on the public. Both are directly controllable by the pilot. Aircrews can reduce power after safely airborne, avoid full power when possible, and apply power smoothly to be help limit noise in potentially affected areas. In a training environment, training procedures and curriculum dictate periodic and short-term needs for aircrews to vary power settings in accordance with the course syllabus and In-Flight Guide.

2.3.1 Public Involvement

Commanders take public concerns seriously and have processes in place that allow members of the public to comment about and seek answers to questions about operations at the installation and ensure those comments are reviewed by appropriate members within the command.

Public Outreach. JBSA has an active public relations program to inform members of the public of upcoming special events or training operations so that individuals have the ability to plan their

personal activities that may include various means such as the installation web-site and local newspapers to make information available. The command uses these same processes to inform the public about events that may increase noise or have more impacts on specific areas for short periods of time. An example is the Joint Base San Antonio 2017 Air Show and Open House.

Noise Complaint Procedures. JBSA-Randolph investigates all noise complaints to determine compliance with base Standard Operating Procedures. These investigations ensure that both DAF and public interests are protected and provide ongoing communication between the base and the local communities. Persons with complaints or comments are encouraged to contact the 12 FTW Public Affairs Office at (210) 652-1272. The Public Affairs Officer records the pertinent information from these complaints and comments such as who called, in addition to the location, time, and description of the noise-generating event. Callers may request a response or feedback and should provide their name and contact information.

The Public Affairs Officer provides copies of the complaints to the JBSA Commander, AETC Commander, and Operations Officer, the following day, and each complaint receives a thorough analysis and a recommendation to address the issue. When necessary, the base officials may communicate directly with the complainant. The Community Planning and Liaison Officer maintains a file of noise complaints for historical records.

2.3.3 Additional Oversight Measures

The JBSA Commander takes public concerns seriously and has processes in place for additional oversight measures. To ensure transparency with community leaders and the public, the following oversight measures are currently implemented or being considered for adoption, and others may be added or changed as needs change over time:

- JBSA will publish notices of surge training periods.
- Training schedules will be managed by AETC to ensure operations remain consistent with conditions studied under the National Environmental Policy Act, documented in the Record of Decision, and the installation's AICUZ study.
- ATC will monitor and coordinate with all participating aircraft to ensure pattern integrity and proper sequencing of aircraft during field pattern training operations.
- Conduct high-power engine run-ups during daylight hours to the maximum extent possible. Run-ups that must be conducted during evening or nighttime hours will the aircraft is properly positioned to reduce noise intrusion on the surrounding community.
- Monitor approaches to the airfield to ensure patterns do not extend too far from the airfield.

2.4 References

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D-2. T-7A Adaptive Management

1.0 Introduction to the T-7A Adaptive Management Strategy

Adaptive management means that the USAF will further NEPA's Section 101 goals to "protect, restore, and enhance the environment" (40 CFR 1500.1(c)), the Air Force will implement an adaptive management approach to basing and operating the T-7A aircraft at Randolph AFB. Adaptive management is a proactive mitigation oversight program to understand complex, interrelated systems through a long-term process. Adaptive management is built around a continuous cycle of experimentation, evaluation, learning, and improving over time. The ability to experiment and test hypotheses in a time frame that allows meaningful data to be gathered and evaluated is an important element of that process. Adaptive management will take place within the bounds of the impacts and mitigations assessed.

The T-7A training variables analyzed in the EIS and their relationships to biological, physical, and social systems are complex. In the analysis of anticipated impacts in the EIS, the Air Force has done its best to accurately predict potential impacts and anticipate future conditions using the best information and tools at the time of analysis. However, T-7A operational areas are dynamic systems that are continually evolving: it is likely that there will be unanticipated changes in baseline conditions, that new information may become available, or that the effectiveness of mitigation measures may be different than expected. Adaptive management techniques are well suited to such circumstances.

The adaptive management program incorporates the following kinds of adaptive management approaches:

- Noise models will be used to understand the effects of the new curriculum being designed to leverageT-7A aircraft capabilities.
- Comparison of the noise model findings with the accuracy or completeness of the earlier predictions will highlight problem areas and suggest courses of action to mitigate them.

New knowledge and information produced through experience, further technical development, and trial of new or altered operational parameters can be incorporated into management options and recommendations to appropriate decision makers.

The analysis in the EIS identifies environmental impacts Air Force environmental impact analysis process requires the proponent to prepare a mitigation plan and forward it to Headquarters (HQ), U.S. Air Force for review within 90 days of the signing of the Record of Decision (ROD). Among other things, the mitigation plan must specifically identify each mitigation measure, how the measures will be executed, and who will fund and implement the mitigations. Requiring the detailed mitigation plan after the signing of the ROD enables the mitigation plan to be tailored precisely to the decision that is made.

Since the adaptive management approach is being adopted as part of the implementation strategy for the beddown and operations of the T-7A at Randolph AFB, any post-ROD mitigation plan for its beddown and operations will need to include provisions for monitoring noise post-

implementation and the success of the mitigations, as well as procedures for making necessary adaptations. The following additional steps will also be part of the mitigation plan:

- Identifying the type of monitoring for the action and each mitigation.
- Delineating how the monitoring will be executed.
- Identifying who will fund and oversee its implementation.
- Establishing the process and responsibilities for identifying and making changes to the action or mitigations to influence beneficial results or avoid/reduce adverse ones.

As noted above, the adaptive management strategy is being adopted to implement this program because of incomplete or unavailable information. The follow section provides greater detail about the specific incomplete or unavailable information, why it is unavailable, and steps to gather the information.

1.1 Incomplete or Unavailable Information

The Council on Environmental Quality (CEQ) regulation at 40 CFR Section 1502.22 provides guidance on how to continue with the NEPA analysis when information is incomplete or unavailable.

Incomplete or unavailable information relates to the T-7A proposal, DAF is identifying that information used in the determination of air quality emissions and aircraft noise contours is incomplete or unavailable. The lack of engine and actual aircraft operational data for the T-7A aircraft provides a lower confidence in predicting actual impacts. Normally an agency would conduct its impact analysis once the appropriate studies and data sets were complete and available to ensure the most accurate analysis could be conducted and presented to the public and considered by the agency's decision maker. In this instance, the DAF needs to validate or improve the data that was input to model the air quality and aircraft noise impacts.

In the interest of evaluating options and informing the public as early as possible in the planning process, the DAF has determined to move forward with the preparation of this EIS and commit to the collection of better data and with which to reassess impact levels at a later date. This urgency is a necessary course of action because the data will continue to be unavailable until aircraft are at Randolph employed in local conditions by DAF instructor pilots and military flying trainees. That data is unavailable while the aircraft is in testing in St. Louis, Missouri by commercial test pilots. The two parts of the action, construction and operations, are connected actions as defined under the implementing regulations of NEPA, and therefore must both be considered and cannot be analyzed separately. The need to accommodate the construction schedule is mandated by the funding time limits imposed for the Military Construction Projects as authorized in the National Defense Authorization Act passed into law by Congress and the data cannot be obtained until the aircraft are at JBSA-Randolph flying under local conditions in a training versus test use.

The DAF has contracted with Boeing to build and supply DAF with the new T-7A Red Hawk training aircraft. The DAF will begin receiving the T-7A from Boeing in 2023 and will almost immediately put the aircraft into service for pilot training at JBSA-Randolph and begin to phase

out the currently used T-38C Talon. At that time, the T-7A aircraft will be flown by DAF pilots performing training missions at JBSA-Randolph and DAF pilots will become familiar with flying that particular aircraft. Therefore, the precise throttle settings and maneuvers of the T-7A are unknown at this time and will remain unknown until the actual training begins in 2023. In order to press forward with the analysis of the Proposed Action for both facility construction and aircraft operations, several assumptions had to be made to develop data for input into the DAF Air Conformity Applicability Model (ACAM) and the NOISEMAP model. The ACAM enables the DAF to model and predict the amount of emissions for various pollutants into the atmosphere for the Proposed Action.

NOISEMAP allows the DAF to use data associated with flying the aircraft such as throttle settings, to predict where and to what magnitude noise energy will be experienced both on and off base. Due to the lack of specific knowledge about the T-7A aircraft, the following assumptions were made for purposes of modeling and analysis within the EIS:

1. The course curriculum currently used for T-38C students would also be used for T-7A students.
2. Aircraft flight tracks for approach, departure, and near-field patterns would be the same for the T-7A as are currently used by the T-38C.
3. Aircraft power settings along the segments of the flight tracks would be the same for the T-7A as they are for the T-38C.

Based on these assumptions, the DAF developed the Proposed Action and two action alternatives for various levels of flight training. The Proposed Action presents the operational level to sufficiently train the pilots in the T-7A aircraft at JBSA Randolph at the same level of student loading and courses now taught at JBSA-Randolph. Basically, this assumed a simple swap of aircraft. Alternative 2 represents training at a 15 percent greater intensity and Alternative 3 presents a 25 percent greater training level intensity. The Proposed Action and these two alternatives were presented to the public during the Public Scoping process. After scoping, DAF used the assumptions above with the various intensities of training and input the data into the ACAM model to predict emissions. The results showed that nitrogen oxide (NO_X) , a precursor to ozone, levels would be produced at levels beyond those established for National Ambient Air Quality Standards. JBSA-Randolph is located within Bexar County which is in nonattainment for the 8-hour ozone standard. This prompted DAF to create a new action alternative that would result in emissions that would remain within the standards. Alternative 1 represents the intensity of aircraft operations that achieves that goal. However, although this alternative allows DAF to maintain the appropriate level of pilot training through 2025 with the T-7A aircraft, fewer T-7A aircraft would be allowed to operate than planned under the Proposed Action from 2026 and beyond. Reduced flight operations would not allow full training of DAF student pilots at JBSA-Randolph.

The DAF used this same data with the same assumptions for flight tracks and power settings and modeled the predicted aircraft noise contours. The results were similar in that the DAF realized that the new noise contours would be significant in terms of the amount of off-base acreage and residents that would be exposed to higher noise levels resulting in greater

disturbance and incompatible land use based on the Land Use Compatibility table in Department of Defense Instruction 4165.57.

Based on both of these modeled results, DAF air quality and noise experts reviewed the assumptions and data and determined that the modeled results were accurate based on the data input. However, the experts suggested that a comparison of the two aircraft be examined to see if previous assumptions could be refined. The review did list the following aircraft differences:

1. The T-38C is a twin-engine aircraft that uses two General Electric J85-GE-5 turbojet engines with afterburners that produce 2,050 pounds dry thrust and 2,900 pounds dry thrust with afterburners.
2. The T-7A is a single-engine aircraft that uses one General Electric F-404 turbofan engine. According to the General Electric F404 webpage, this engine produces a range of thrust from 17,700 to 19,000 pounds.
3. The two types of engines operate at different noise frequencies. The T-38C J85-GE-5 engine operates at a higher frequency than the T-7A GE F-404. The lower frequency engines generally are much louder at similar power settings.

The difference in aircraft engines led to the following discussion:

1. DAF experts agree that the power settings used for the T-38C training scenarios at JBSA-Randolph may not be the same power settings required for the same T-7A training operations. It may be possible to use lower power settings with the T-7A aircraft and achieve similar aircraft performance for approach, departure, and near-field patterns. This could only be validated through actual flight training patterns at JBSA-Randolph.
2. If lower power settings were feasible, it is still unknown how this would affect the noise contours because of the difference in types of engines noted above. Different power settings would require additional NOISEMAP modeling.
3. Any adjustment in power settings would also result in a change to aircraft emissions and require additional ACAM modeling.
4. The suggestion was made based on the info above to employ an additional assumption in the Draft EIS that aircraft power settings for modeling purposes should be decreased for the T-7As. However, any reduction of power settings would be an arbitrary decision and would not provide a greater degree of confidence in model results.
5. The assumptions and data used for ACAM and NOISEMAP modeling may be the best data at this time but are noted as incomplete and unavailable information because of unknown operational settings for the T-7A in training missions.
6. DAF must collect data on the operations of the T-7A at JBSA-Randolph and re-examine the predicted air quality and noise outcomes and develop specific mitigation strategies in a manner that demonstrates the most transparency in the process and is in the best interest of the DAF and community.
7. After collection of noise and air emissions data, the DAF must analyze and determine if the emissions data approved in the ROD is accurate. If changes in operations are

desired as part of this evaluation, then the DAF must ensure that any changes in operations are subject to the general conformity process required by 40 CFR Part 93, Subpart B before any changes are implemented.

The next step in collecting the needed aircraft operating data is planning a framework for post-EIS efforts. This plan should include identification of DAF goals, a strategic set of actions for collecting data, application of the results, and a plan for potential outcomes and DAF commitments through mitigation. Following this approach will allow the DAF to proceed with the JBSA-Randolph T-7A Recapitalization EIS and commit to a Record of Decision for facility construction and procedures to improve and apply data sets for T-7A aircraft operations.

An important factor to keep in mind is that the T-7A aircraft will be delivered incrementally to JBSA-Randolph starting in 2023 and increasing in succeeding years as shown for the Proposed Action and each of the action alternatives. This incremental delivery and planned increase in T-7A operations provides the DAF with time to collect the necessary data, re-run ACAM and NOISEMAP models, more accurately define the potential impacts, and implement revised flight operations and course rules to mitigate impacts to the community.

The primary goal of DAF in implementing additional T-7A data collection to complement this EIS is to maintain the pilot training structure and classes at JBSA-Randolph at a level that fully and successfully trains student pilots. The secondary goal of DAF is to maintain positive community relations through transparency of process and controlling the impacts to the community to the greatest extent possible.

The plan for data collection will include the following elements defined in greater detail:

- What needs to be measured and how? What is the timeline for collecting and validating data?
- What does DAF do with the new data?
- Air Quality: Insert specific info on timeline of State reassessment of nonattainment and creation of a state implementation plan (SIP) and how will DAF collect data to support inclusion of aircraft emissions and offsets in the new SIP.
- Aircraft noise: Insert specific information on collection of noise data through modeling based on accurate power settings and flight tracks, collect actual noise monitoring data in specific sensitive receptor locations, and use the info to develop a new noise study, develop a new AICUZ plan, and perhaps an updated CUP if needed.
- Citizen participation.

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