

DRAFT ENVIRONMENTAL IMPACT STATEMENT

SPACEX STARSHIP-SUPER HEAVY LAUNCH VEHICLE AT LAUNCH COMPLEX 39A

at the Kennedy Space Center, Merritt Island, Florida

Volume II, Appendix C.1, Part 4

August 2025



**Federal Aviation
Administration**

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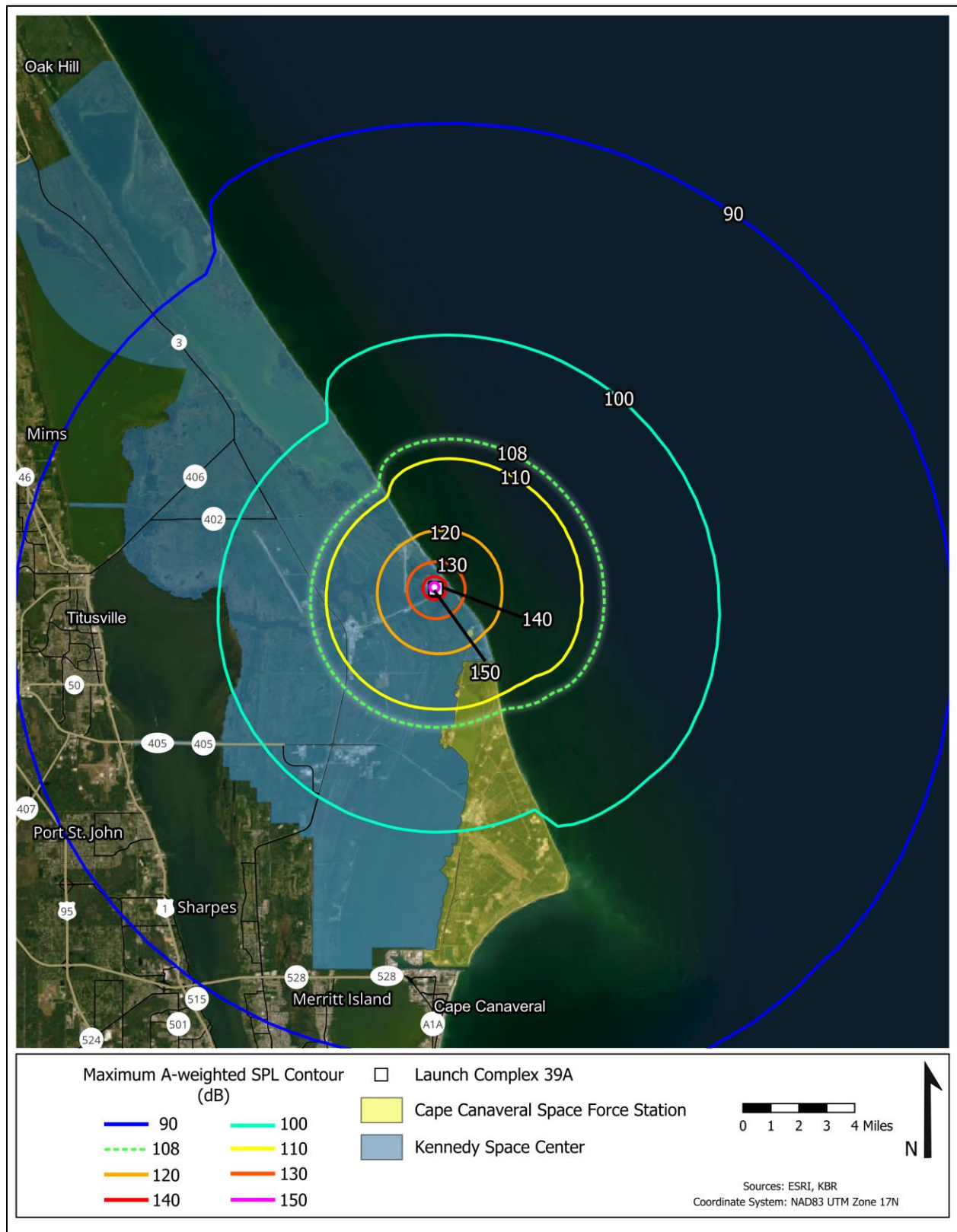


Figure 124. Starship Orbital Launch from LC-39A: Maximum A-Weighted Sound Levels: Winter Night

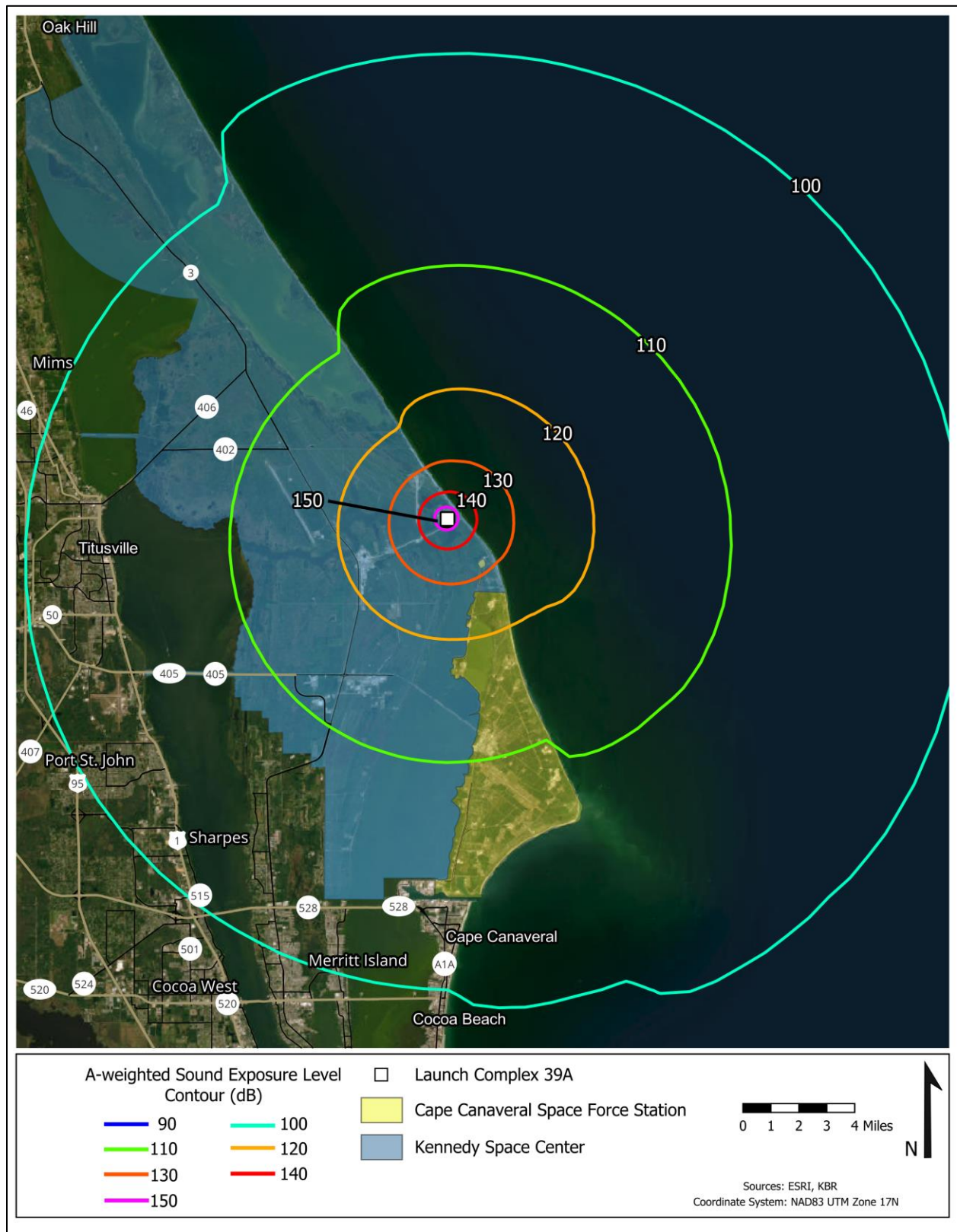


Figure 125. Starship Orbital Launch from LC-39A: Sound Exposure Levels: Winter Night

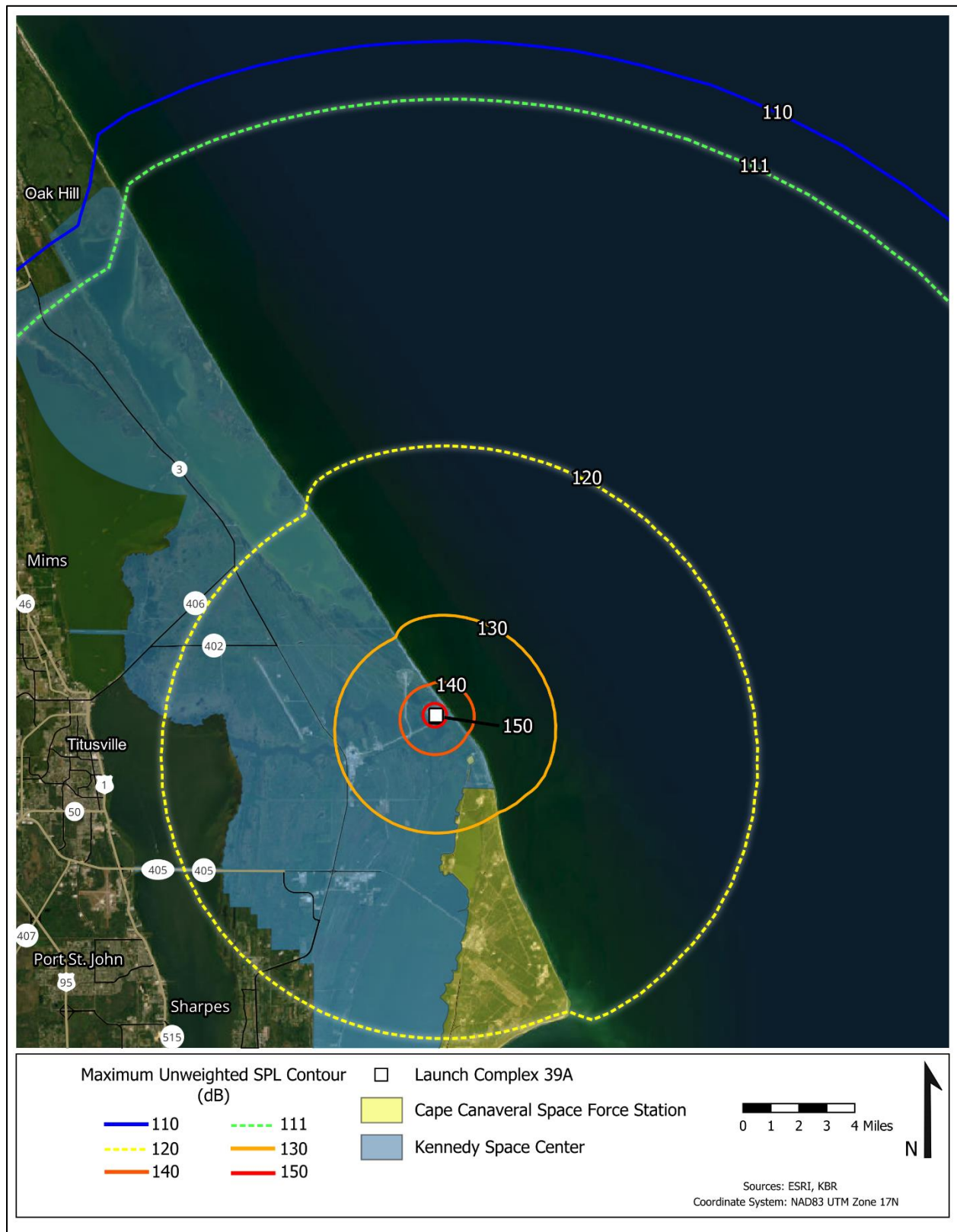


Figure 126. Starship Orbital Launch from LC-39A: Maximum Unweighted Sound Levels: Winter Night

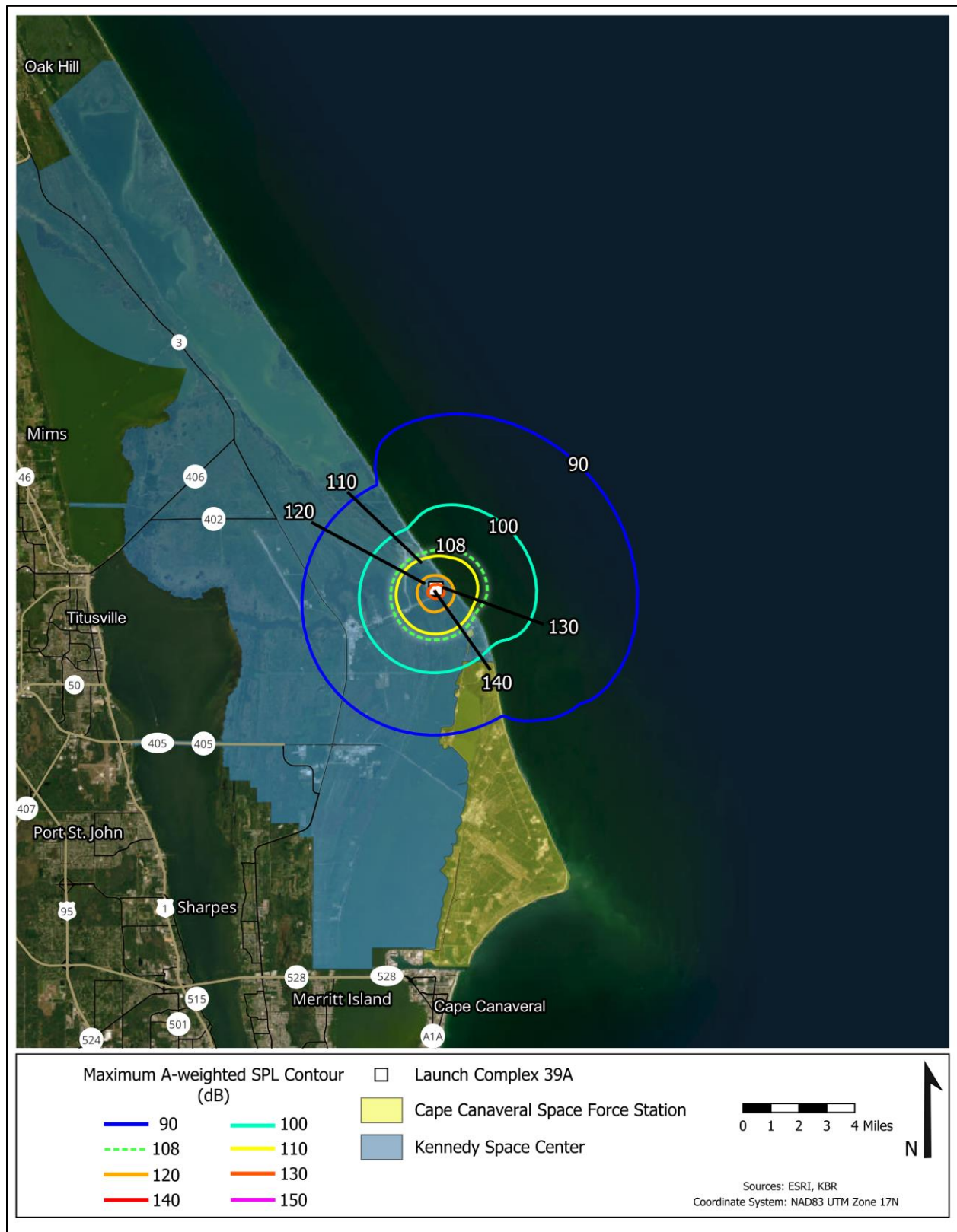


Figure 127. Starship Spacecraft Landing at LC-39A: Maximum A-Weighted Sound Levels: Winter Night

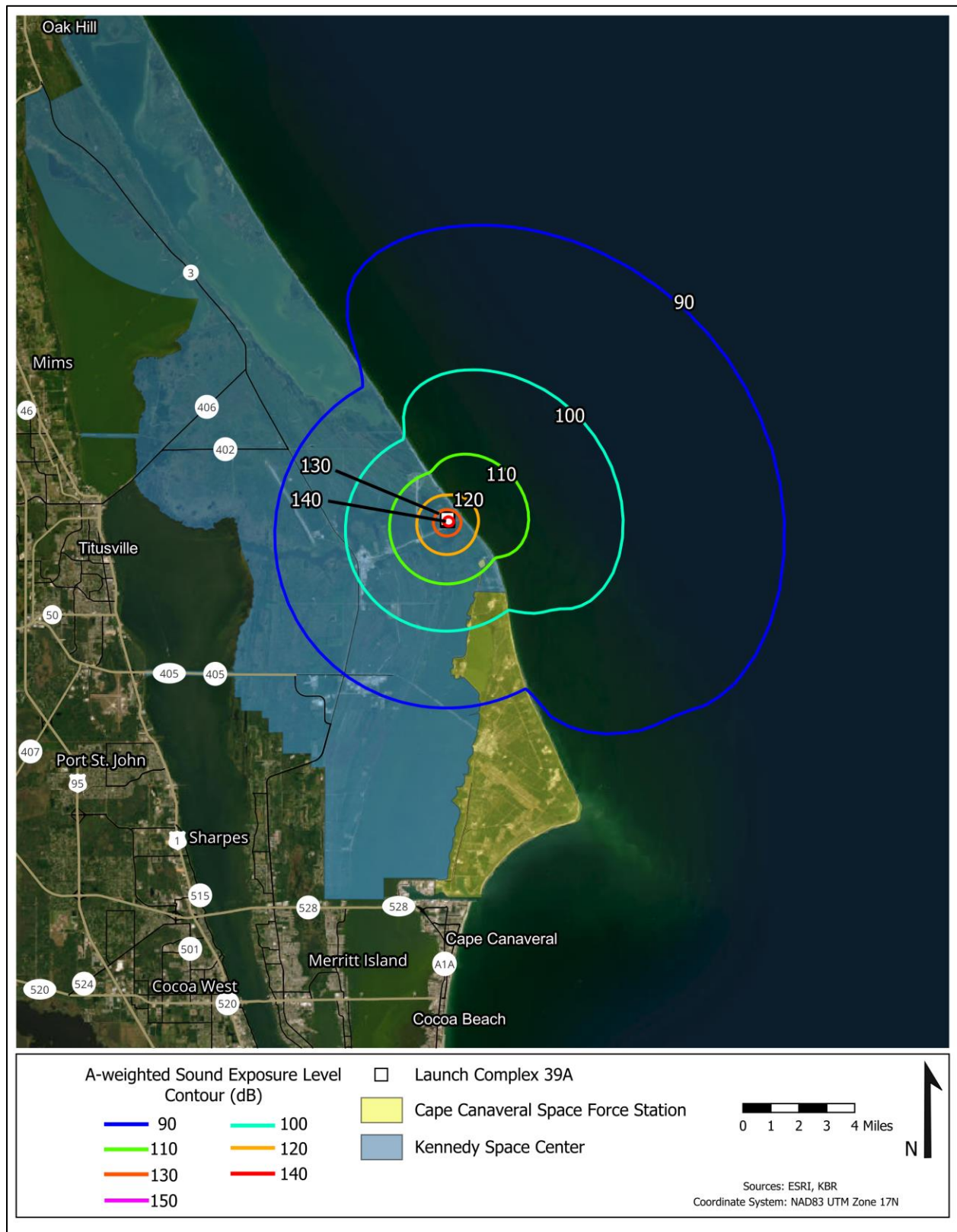


Figure 128. Starship Spacecraft Landing at LC-39A: Sound Exposure Levels: Winter Night

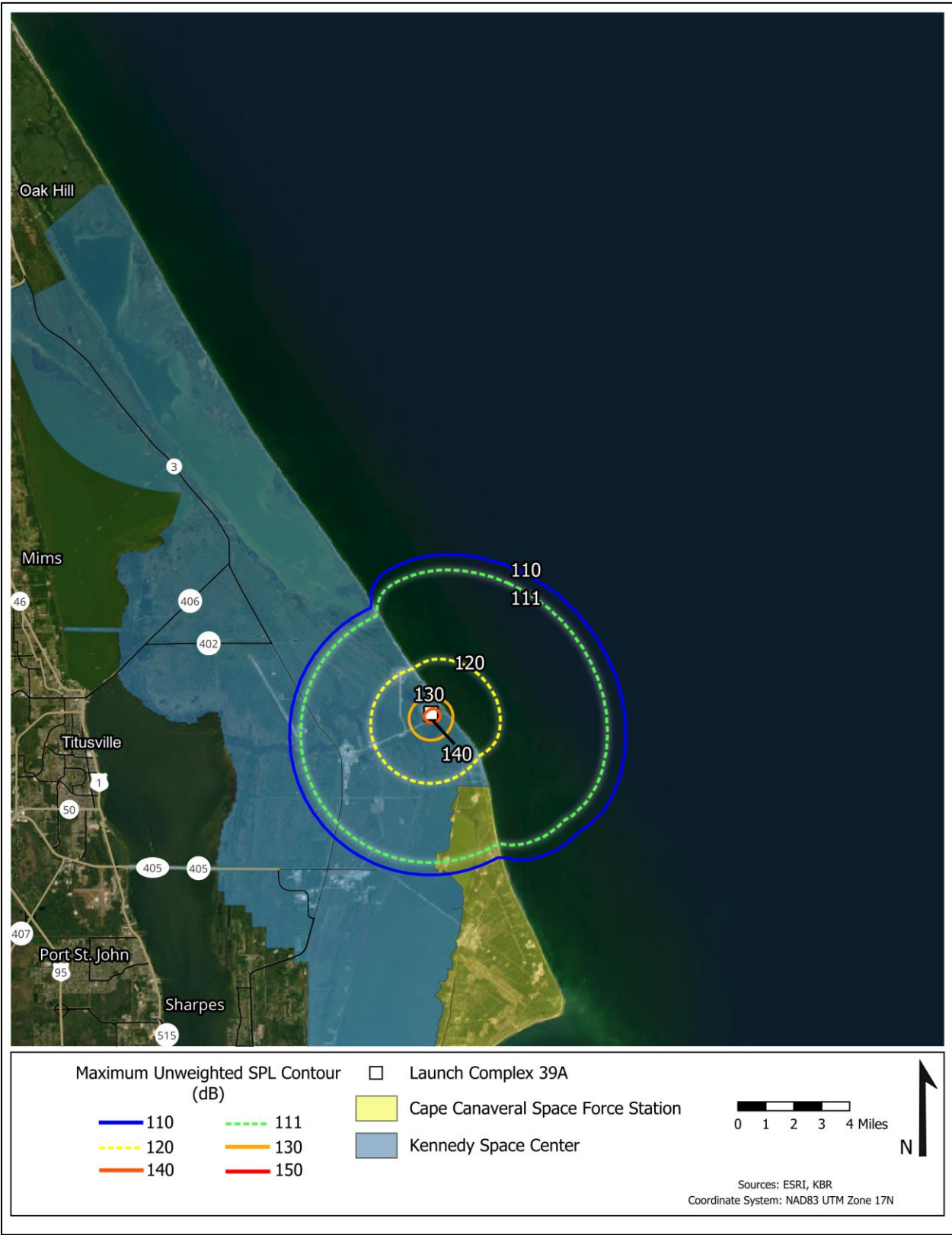


Figure 129. Starship Spacecraft Landing at LC-39A: Maximum Unweighted Sound Levels: Winter Night

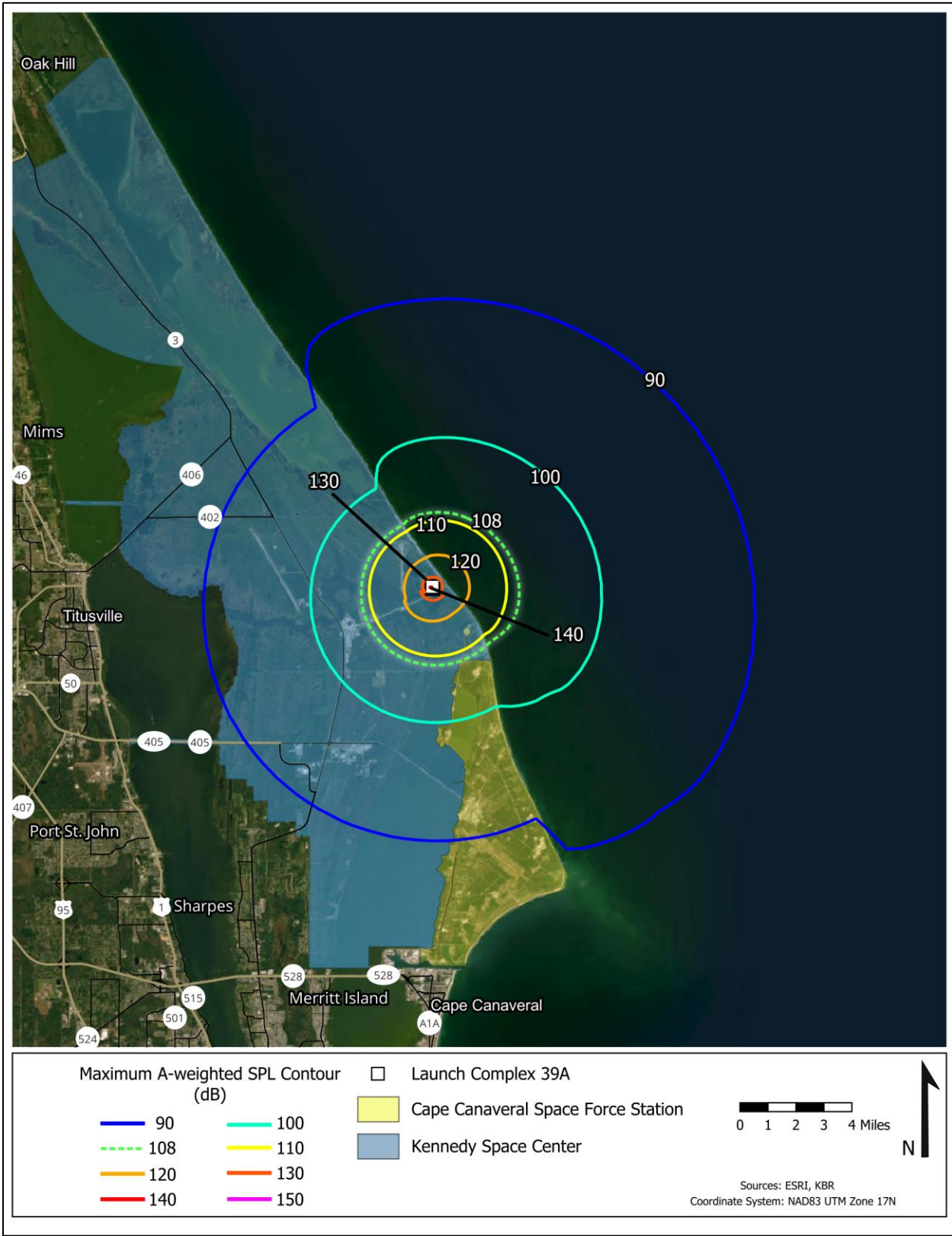


Figure 130. Super Heavy Landing at LC-39A (Nominal): Max A-Weighted Sound Levels: Winter Night

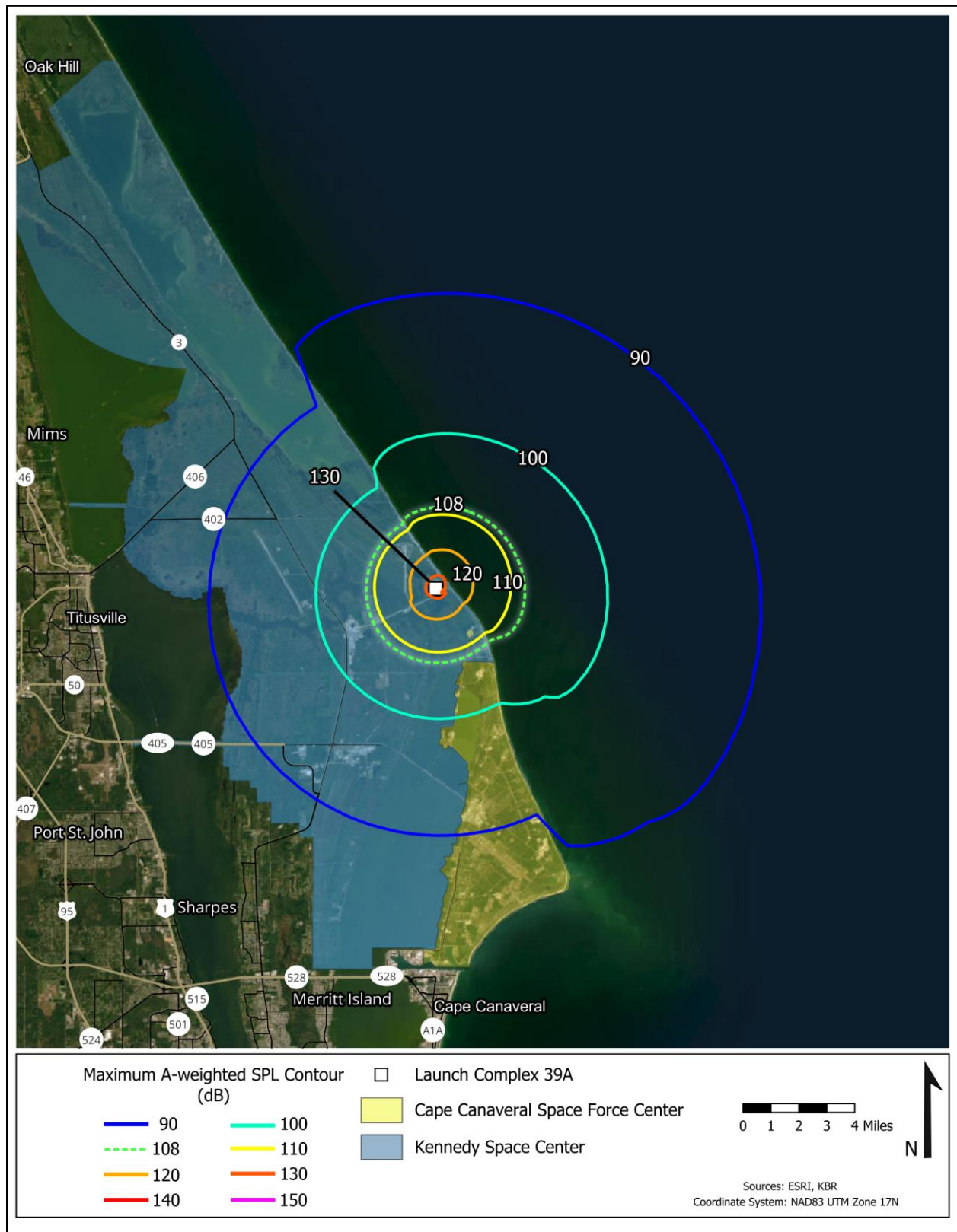


Figure 131. Super Heavy Landing at LC-39A (40-Degrees): Max A-Weighted Sound Levels: Winter Night

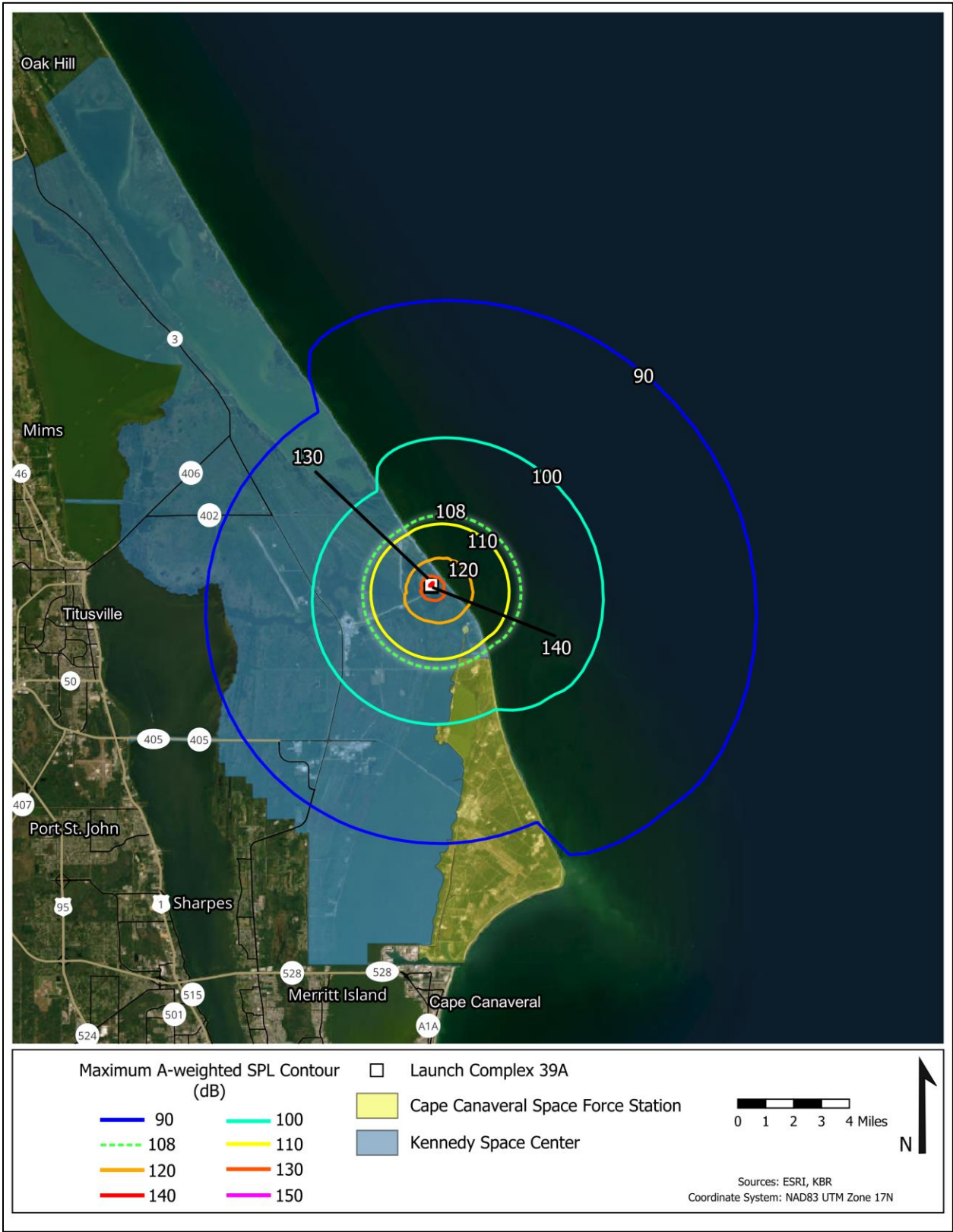


Figure 132. Super Heavy Landing at LC-39A (115-Degrees): Max A-Weighted Sound Levels: Winter Night

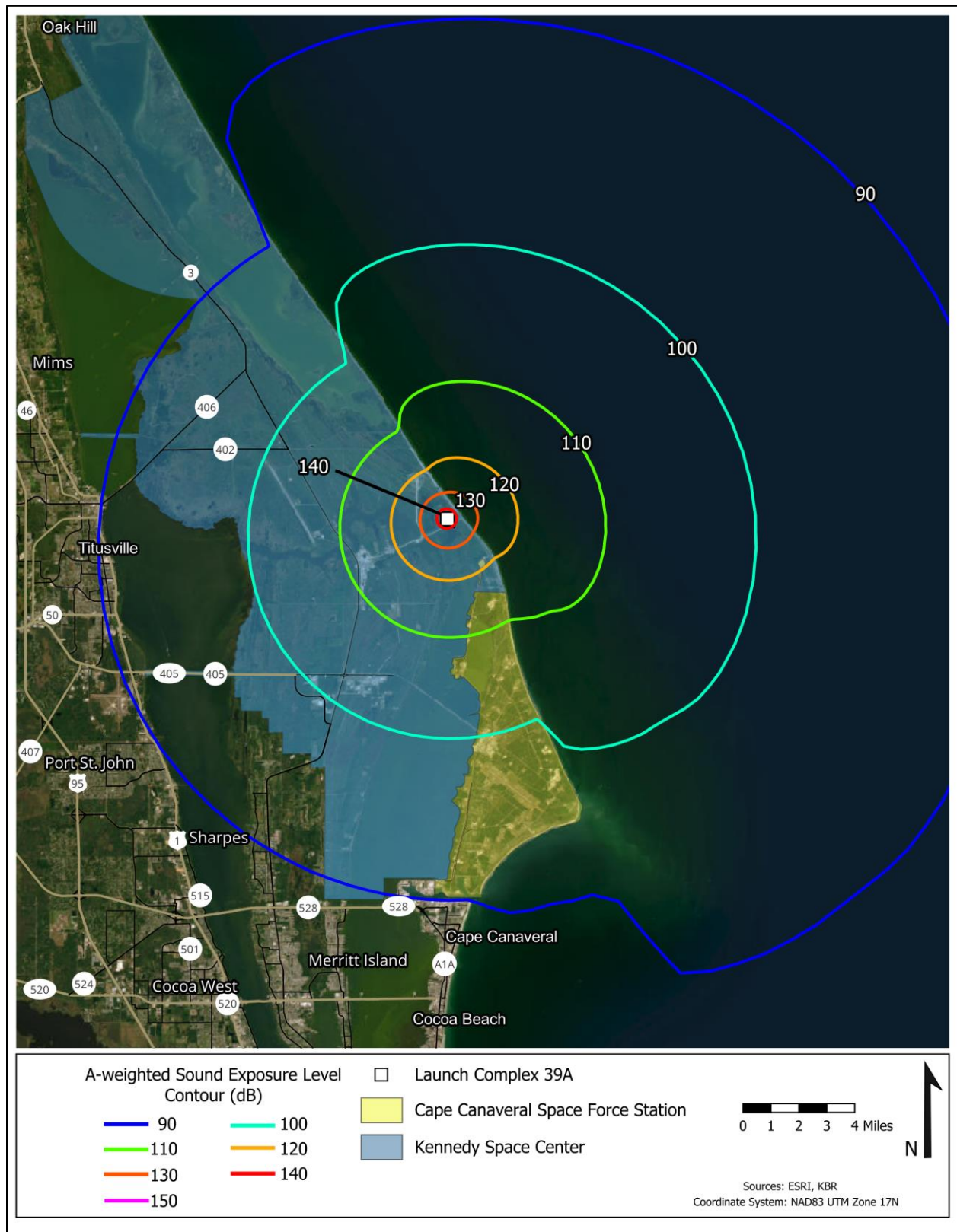


Figure 133. Super Heavy Landing at LC-39A (Nominal): Sound Exposure Levels: Winter Night

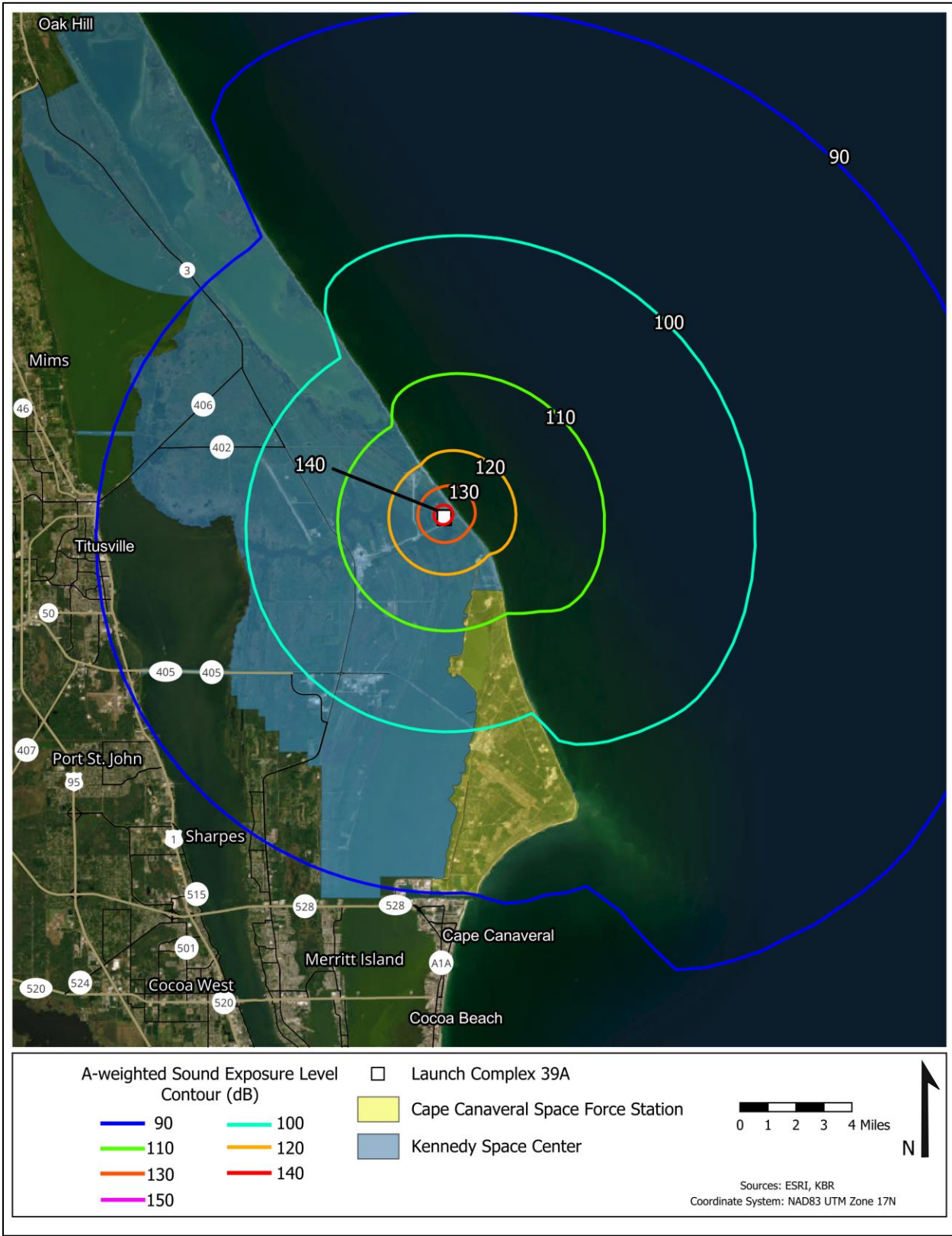


Figure 134. Super Heavy Landing at LC-39A (40-Degrees): Sound Exposure Levels: Winter Night

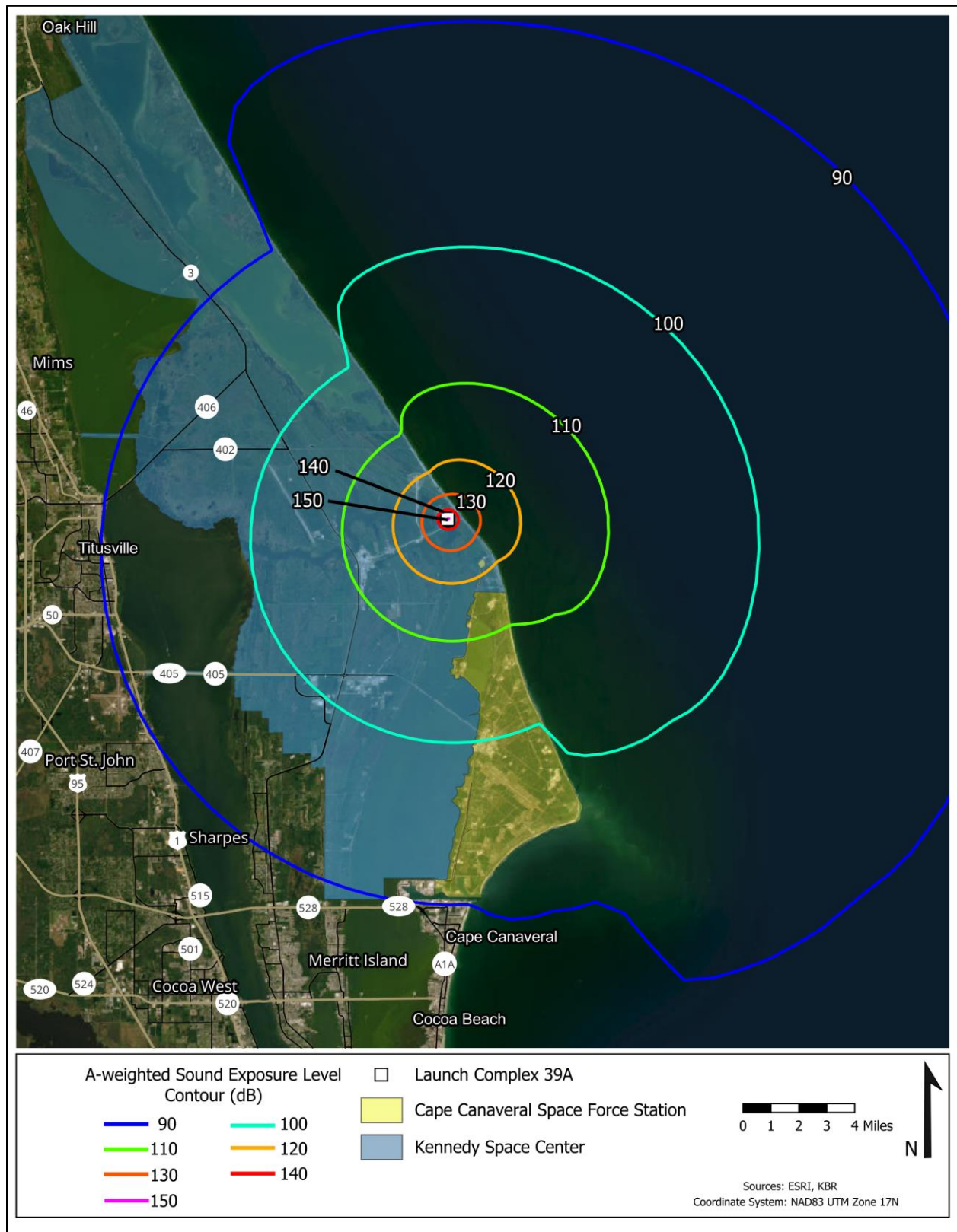


Figure 135. Super Heavy Landing at LC-39A (115-Degrees): Sound Exposure Levels: Winter Night



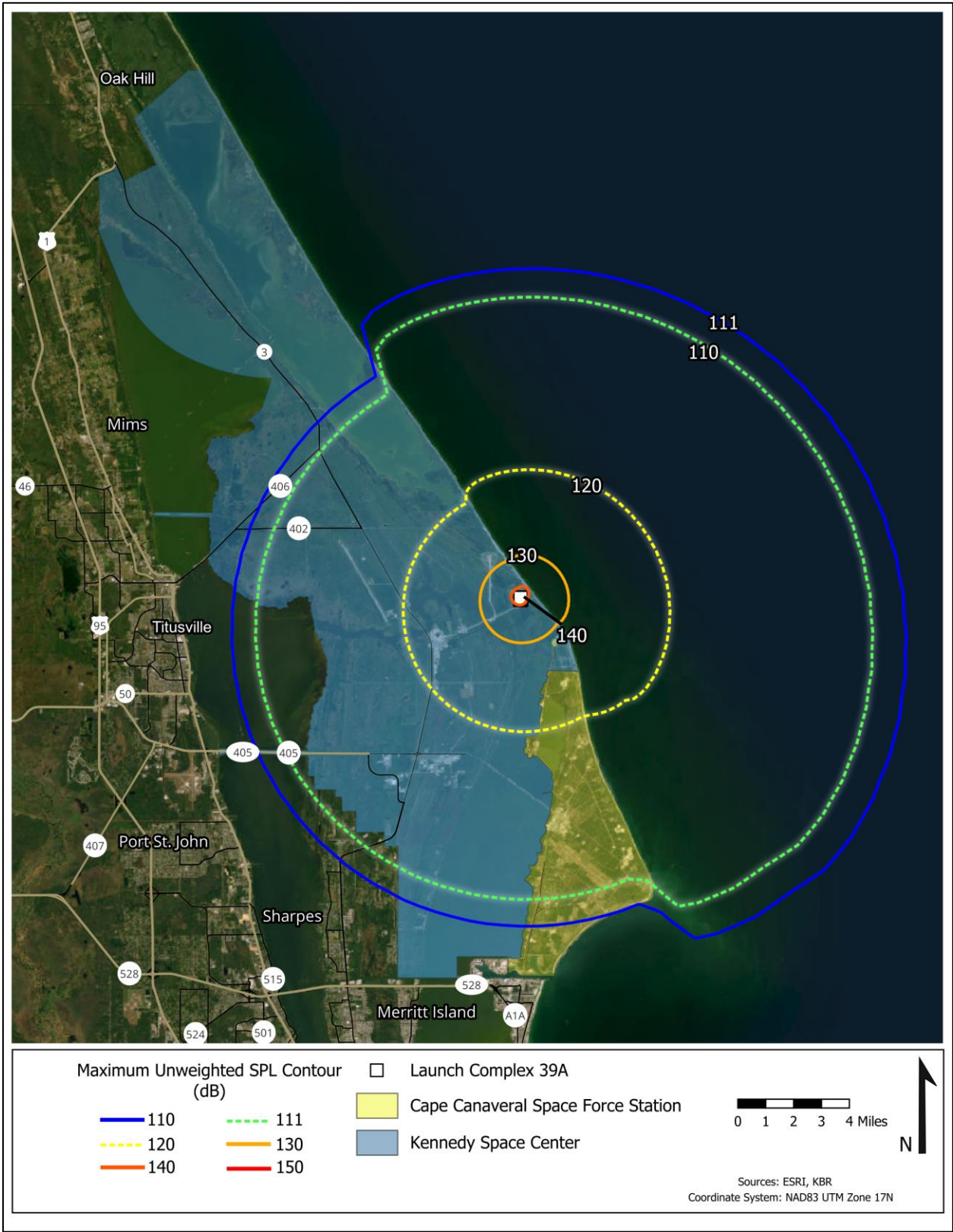


Figure 137. Super Heavy Landing at LC-39A (40-Degrees): Max Unweighted Sound Levels: Winter Night

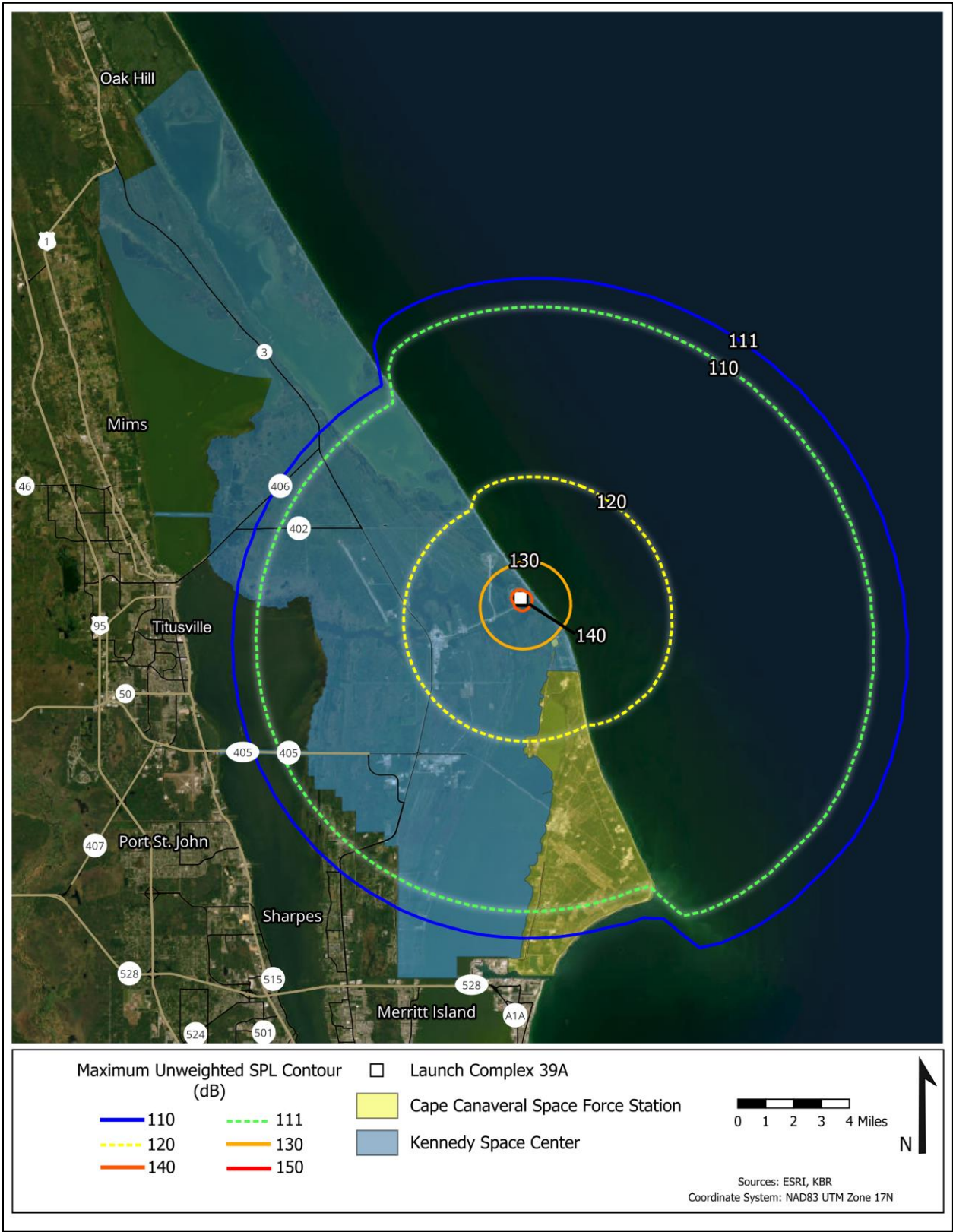


Figure 138. Super Heavy Landing at LC-39A (115-Degrees): Max Unweighted Sound Levels: Winter Night

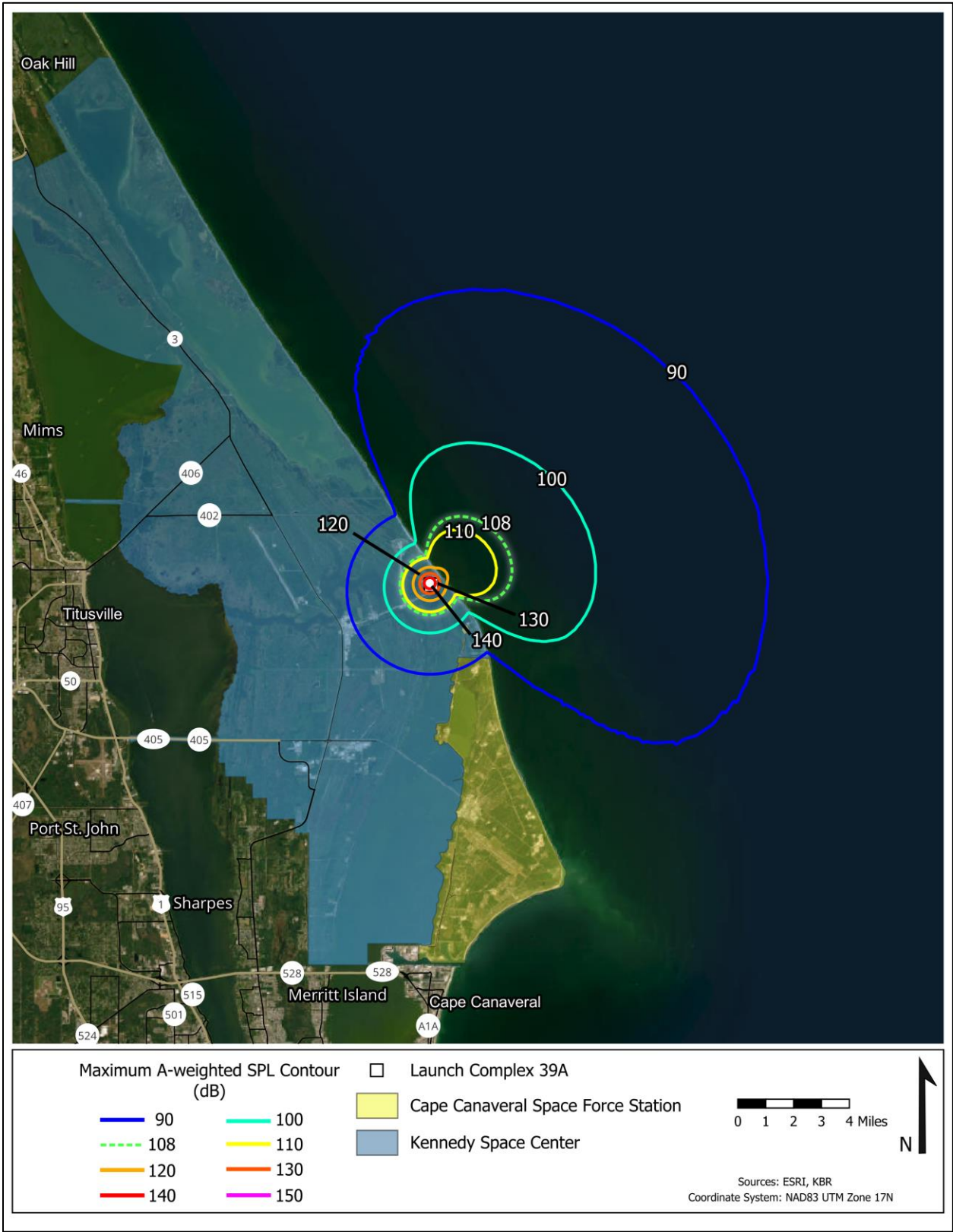


Figure 139. Starship Spacecraft Static Fire Test at LC-39A: Max A-Weighted Sound Levels: Winter Night

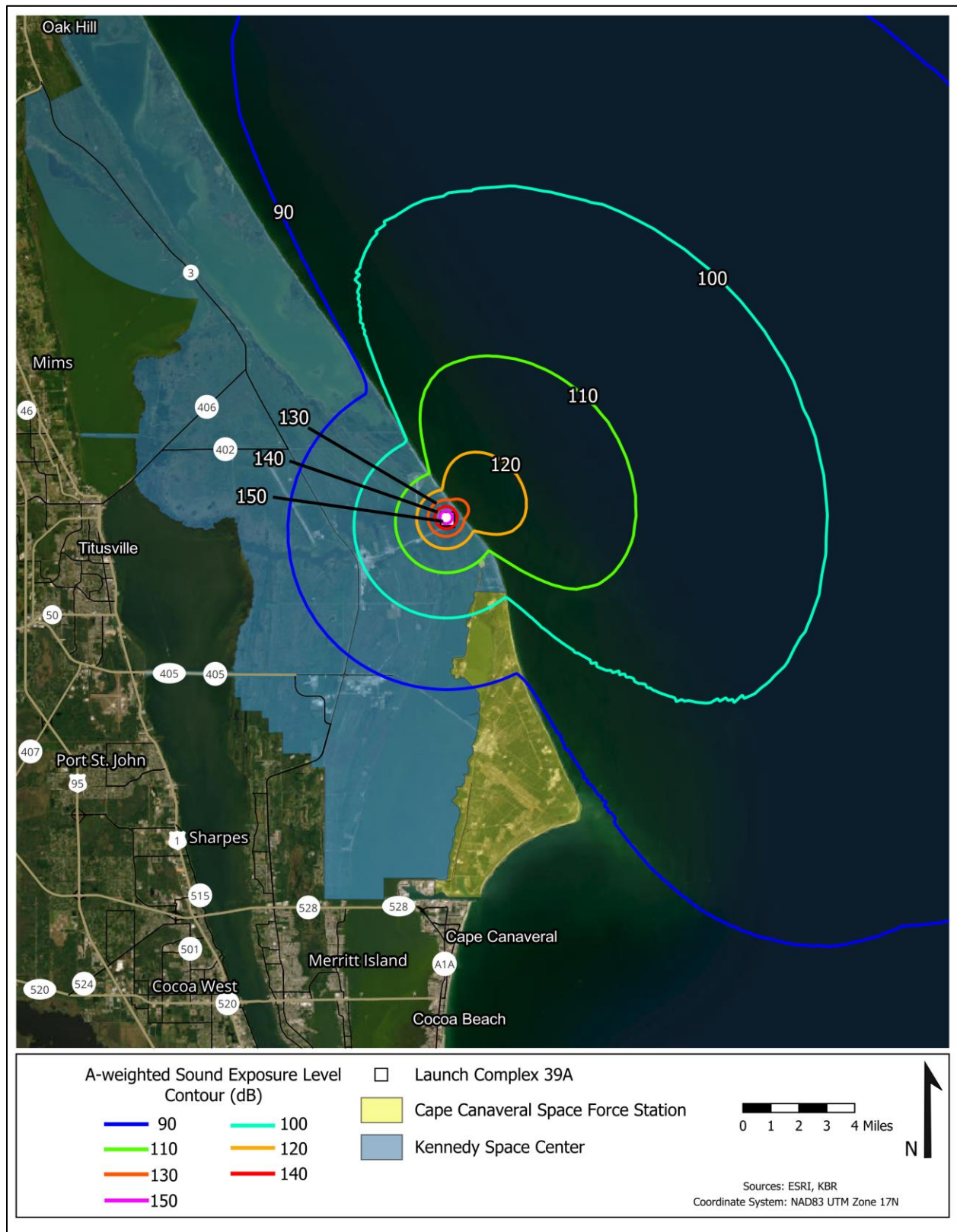


Figure 140. Starship Spacecraft Static Fire Test at LC-39A: Sound Exposure Levels: Winter Night

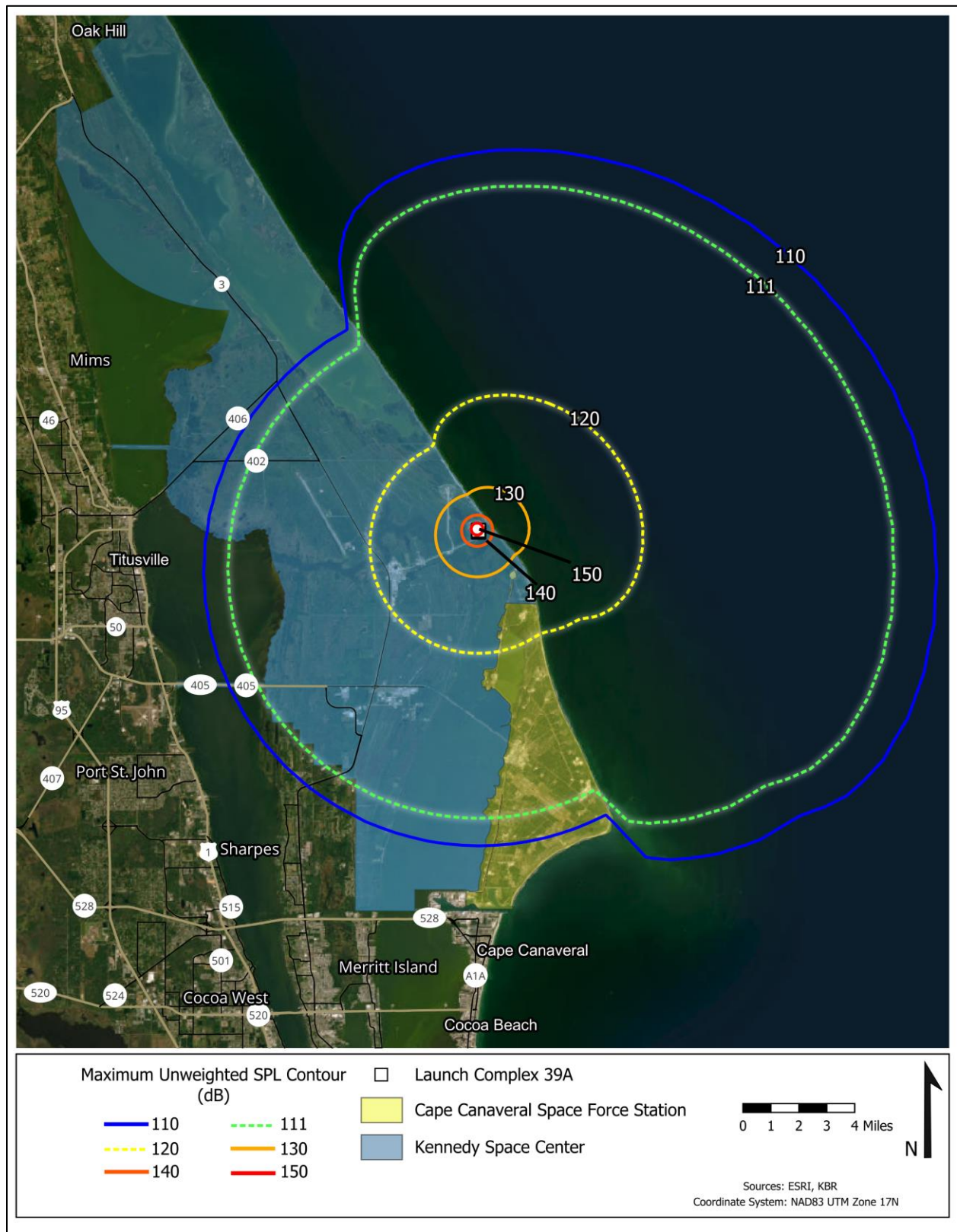


Figure 141. Starship Spacecraft Static Test at LC-39A: Max Unweighted Sound Levels: Winter Night

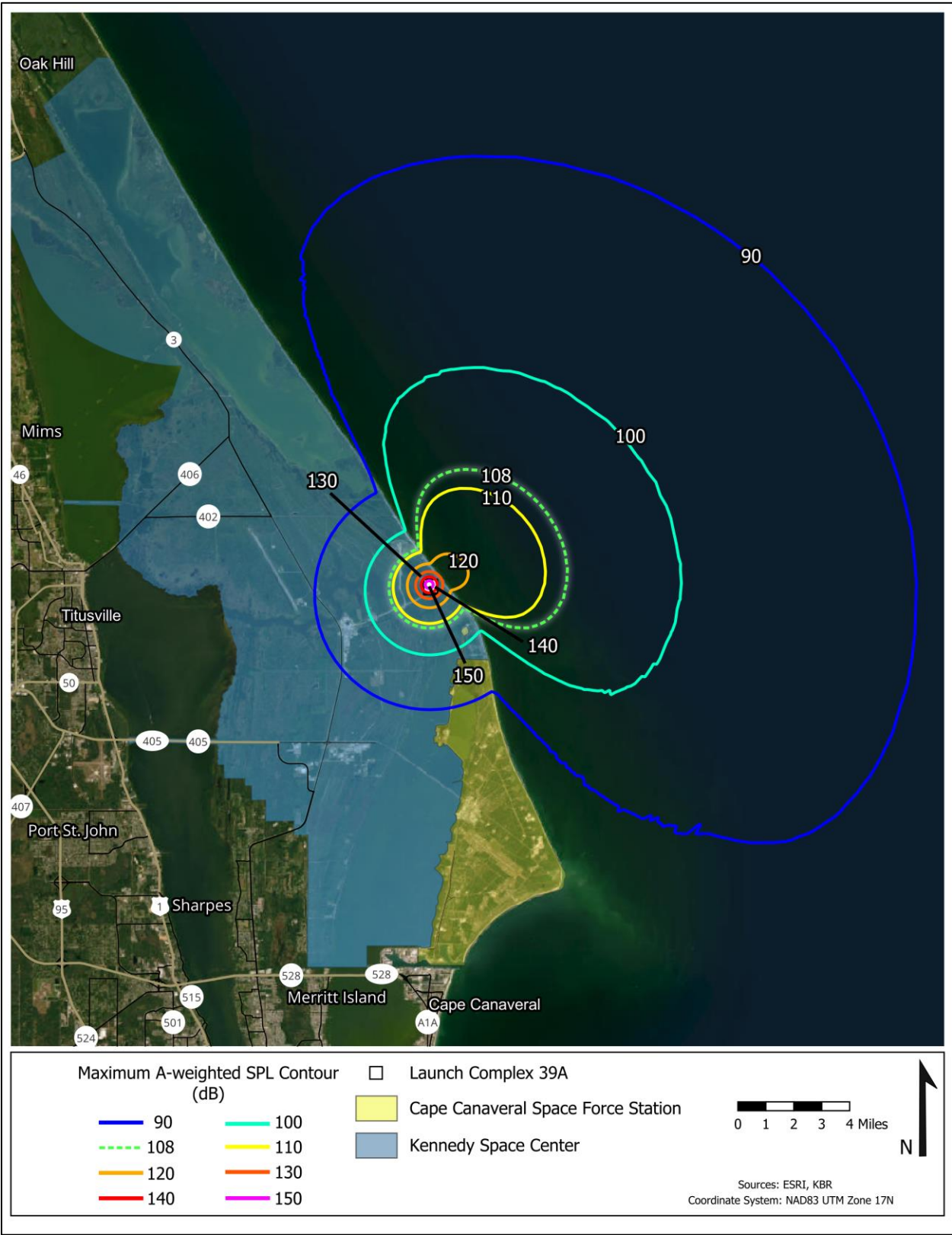


Figure 142. Super Heavy Static Fire Test at LC-39A: Maximum A-Weighted Sound Levels: Winter Night

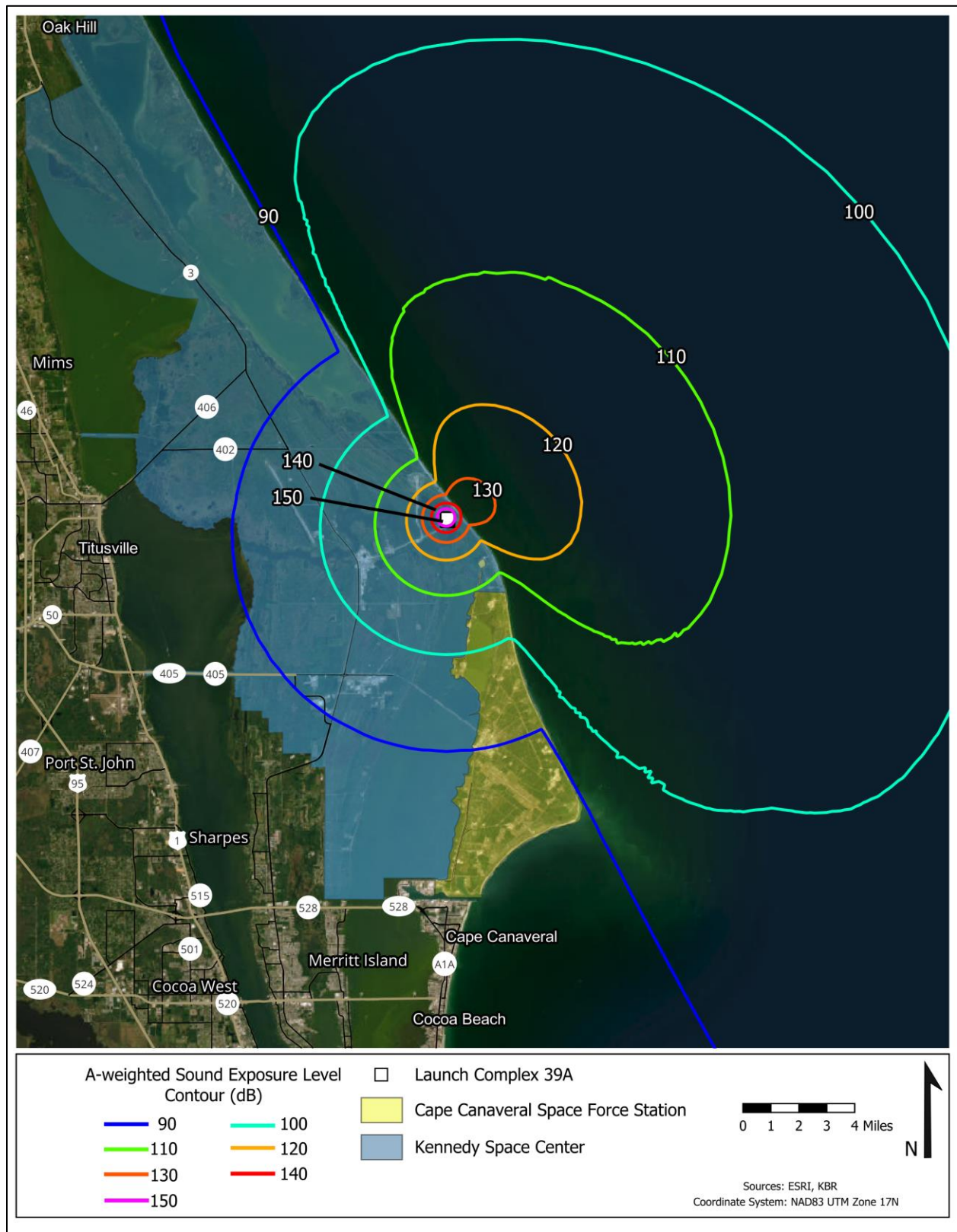


Figure 143. Super Heavy Static Fire Test at LC-39A: Sound Exposure Levels: Winter Night

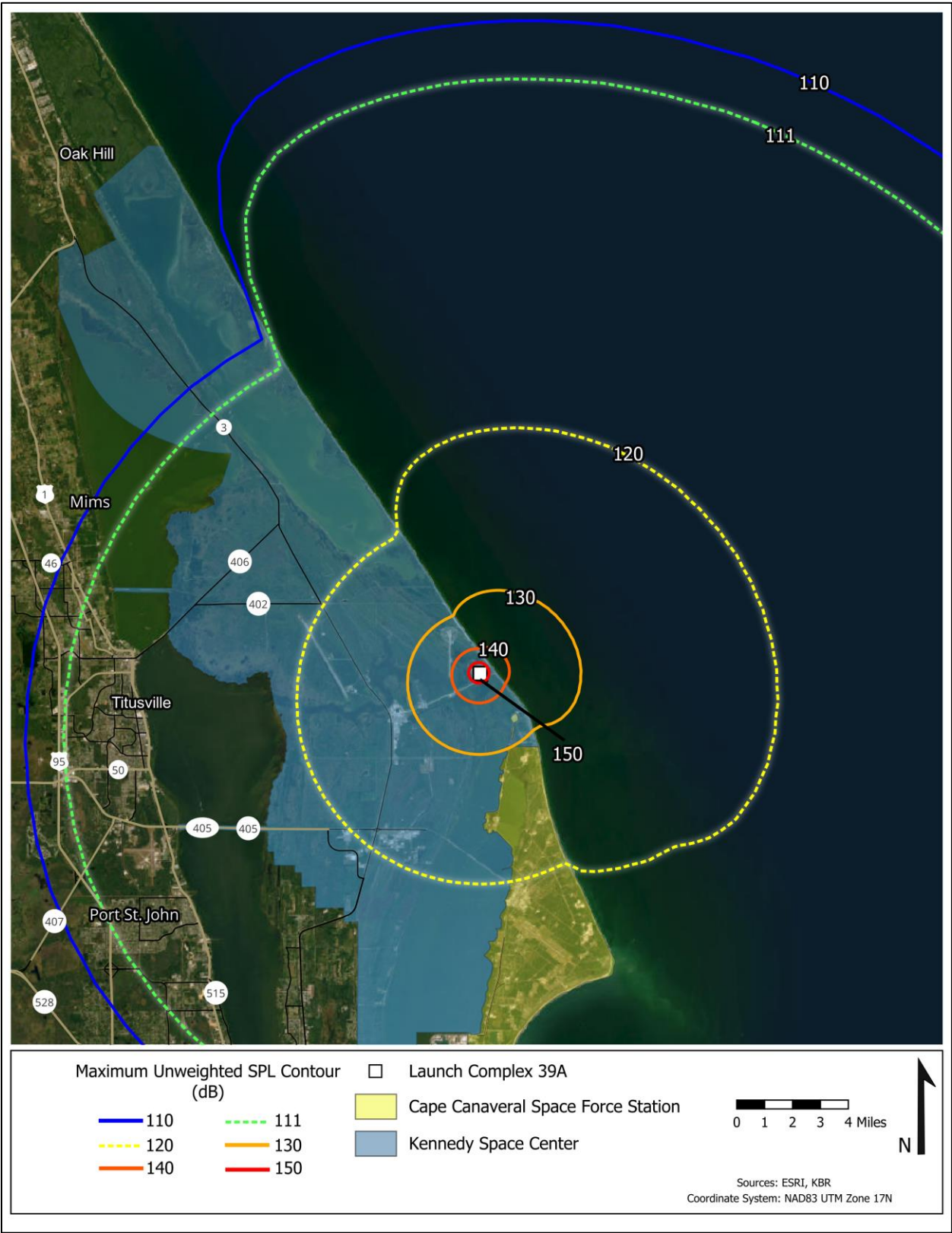


Figure 144. Super Booster Static Fire Test at LC-39A: Maximum Unweighted Sound Levels: Winter Night

3.1.6 Rocket Noise: L_{Amax} , SEL, and L_{max} Levels at Points of Interest [Tables]

Table 11. Rocket Noise Metrics at Points of Interest: Starship Orbital Launch: Annual Mean

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	99.2	109.2	121.5
SpaceX Operations Area	Merrit Island	104.3	114.3	125.5
Titusville Beach	Titusville	124.5	134.5	137.6
Playalinda Beach	Titusville	109.0	119.0	128.9
Kennedy Space Center Visitor Complex	Merrit Island	100.8	110.8	122.9
KSC Child Development Center	Merrit Island	101.3	111.3	123.2
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	100.6	110.6	123.0
Pine Island Conservation Area/Pine Island Estates	Merrit Island	96.5	106.5	119.8
Kings Park Estates - Courtenay	Courtenay	94.5	104.5	118.3
Jetty Park Campground	Cape Canaveral	91.7	101.7	116.0
Rockledge High School	Rockledge	86.5	96.5	112.5
Merritt Island	Merrit Island	87.5	97.5	113.2
Oak Park Elementary School	Titusville	92.1	102.1	116.8
Titusville High School	Titusville	95.0	105.0	118.9
Summerwood Villas	Titusville	93.9	103.9	118.0
Atlantis Elementary School	Port St. John	92.3	102.3	116.8
Fairglen Elementary School	Cocoa	91.3	101.3	115.9
Lewis Carroll Elementary School	Merritt Island	90.2	100.2	115.1
Cocoa	Cocoa	88.8	98.8	114.2
Cocoa Beach	Cocoa Beach	87.1	97.1	112.8
Pinegrove Estates	MIMS	91.1	101.1	116.1
Fern Meadows	West Cocoa	85.7	95.7	112.1
KSC Office Outside BDA	KSC	113.1	123.1	131.7
The Rock Church	Fontain Grant	87.9	97.9	113.9

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 12. Rocket Noise Metrics at Points of Interest: Starship Orbital Launch: Summer Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	96.7	106.7	118.5
SpaceX Operations Area	Merrit Island	103.4	113.4	124.3
Titusville Beach	Titusville	121.1	131.1	134.7
Playalinda Beach	Titusville	112.4	122.4	132.2
Kennedy Space Center Visitor Complex	Merrit Island	100.1	110.1	121.8
KSC Child Development Center	Merrit Island	100.2	110.2	121.7
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	103.5	113.5	125.4
Pine Island Conservation Area/Pine Island Estates	Merrit Island	96.2	106.2	118.8
Kings Park Estates - Courtenay	Courtenay	93.8	103.8	116.9
Jetty Park Campground	Cape Canaveral	89.9	99.9	113.4
Rockledge High School	Rockledge	85.8	95.8	110.8
Merritt Island	Merrit Island	86.4	96.4	111.0
Oak Park Elementary School	Titusville	95.1	105.1	118.9
Titusville High School	Titusville	97.2	107.2	120.4
Summerwood Villas	Titusville	95.4	105.4	118.7
Atlantis Elementary School	Port St. John	93.0	103.0	116.7
Fairglen Elementary School	Cocoa	91.1	101.1	115.0
Lewis Carroll Elementary School	Merritt Island	89.3	99.3	113.3
Cocoa	Cocoa	88.3	98.3	112.7
Cocoa Beach	Cocoa Beach	85.6	95.6	110.3
Pinegrove Estates	MIMS	94.7	104.7	118.8
Fern Meadows	West Cocoa	85.8	95.8	111.1
KSC Office Outside BDA	KSC	112.6	122.6	131.4
The Rock Church	Fontain Grant	92.1	102.1	117.1

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 13. Rocket Noise Metrics at Points of Interest: Starship Orbital Launch: Summer Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	98.1	108.1	119.9
SpaceX Operations Area	Merrit Island	102.6	112.6	123.5
Titusville Beach	Titusville	123.7	133.7	137.3
Playalinda Beach	Titusville	110.4	120.4	130.2
Kennedy Space Center Visitor Complex	Merrit Island	99.4	109.4	121.0
KSC Child Development Center	Merrit Island	99.7	109.7	121.3
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	100.9	110.9	122.8
Pine Island Conservation Area/Pine Island Estates	Merrit Island	95.3	105.3	118.0
Kings Park Estates - Courtenay	Courtenay	93.3	103.3	116.4
Jetty Park Campground	Cape Canaveral	90.9	100.9	114.4
Rockledge High School	Rockledge	85.8	95.8	110.8
Merritt Island	Merrit Island	86.8	96.8	111.4
Oak Park Elementary School	Titusville	92.5	102.5	116.4
Titusville High School	Titusville	94.9	104.9	118.0
Summerwood Villas	Titusville	93.4	103.4	116.8
Atlantis Elementary School	Port St. John	91.5	101.5	115.2
Fairglen Elementary School	Cocoa	90.3	100.3	114.2
Lewis Carroll Elementary School	Merritt Island	89.2	99.2	113.2
Cocoa	Cocoa	88.0	98.0	112.4
Cocoa Beach	Cocoa Beach	86.5	96.5	111.1
Pinegrove Estates	MIMS	92.1	102.1	116.2
Fern Meadows	West Cocoa	85.1	95.1	110.4
KSC Office Outside BDA	KSC	111.1	121.1	129.9
The Rock Church	Fontain Grant	89.6	99.6	114.5

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 14. Rocket Noise Metrics at Points of Interest: Starship Orbital Launch: Winter Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	99.6	109.6	122.1
SpaceX Operations Area	Merrit Island	105.1	115.1	126.3
Titusville Beach	Titusville	125.2	135.2	137.8
Playalinda Beach	Titusville	108.5	118.5	128.2
Kennedy Space Center Visitor Complex	Merrit Island	101.4	111.4	123.7
KSC Child Development Center	Merrit Island	102.0	112.0	124.1
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	100.3	110.3	123.0
Pine Island Conservation Area/Pine Island Estates	Merrit Island	96.8	106.8	120.5
Kings Park Estates - Courtenay	Courtenay	94.7	104.7	119.0
Jetty Park Campground	Cape Canaveral	91.7	101.7	116.6
Rockledge High School	Rockledge	86.2	96.2	113.2
Merritt Island	Merrit Island	87.3	97.3	113.8
Oak Park Elementary School	Titusville	91.3	101.3	116.8
Titusville High School	Titusville	94.6	104.6	119.1
Summerwood Villas	Titusville	93.8	103.8	118.5
Atlantis Elementary School	Port St. John	92.2	102.2	117.3
Fairglen Elementary School	Cocoa	91.2	101.2	116.6
Lewis Carroll Elementary School	Merritt Island	90.1	100.1	115.8
Cocoa	Cocoa	88.6	98.6	114.8
Cocoa Beach	Cocoa Beach	86.8	96.8	113.3
Pinegrove Estates	MIMS	90.1	100.1	115.9
Fern Meadows	West Cocoa	85.3	95.3	112.7
KSC Office Outside BDA	KSC	114.7	124.7	132.6
The Rock Church	Fontain Grant	86.5	96.5	113.4

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 15. Rocket Noise Metrics at Points of Interest: Starship Orbital Launch: Winter Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	101.3	111.3	123.8
SpaceX Operations Area	Merrit Island	105.3	115.3	126.4
Titusville Beach	Titusville	127.3	137.3	139.9
Playalinda Beach	Titusville	106.6	116.6	126.3
Kennedy Space Center Visitor Complex	Merrit Island	101.6	111.6	123.8
KSC Child Development Center	Merrit Island	102.4	112.4	124.5
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	98.4	108.4	121.1
Pine Island Conservation Area/Pine Island Estates	Merrit Island	96.9	106.9	120.5
Kings Park Estates - Courtenay	Courtenay	95.1	105.1	119.3
Jetty Park Campground	Cape Canaveral	93.2	103.2	118.1
Rockledge High School	Rockledge	87.0	97.0	113.9
Merritt Island	Merrit Island	88.4	98.4	114.9
Oak Park Elementary School	Titusville	89.6	99.6	115.0
Titusville High School	Titusville	93.2	103.2	117.6
Summerwood Villas	Titusville	92.8	102.8	117.5
Atlantis Elementary School	Port St. John	91.7	101.7	116.8
Fairglen Elementary School	Cocoa	91.4	101.4	116.7
Lewis Carroll Elementary School	Merritt Island	90.9	100.9	116.5
Cocoa	Cocoa	89.1	99.1	115.3
Cocoa Beach	Cocoa Beach	88.2	98.2	114.7
Pinegrove Estates	MIMS	88.1	98.1	113.9
Fern Meadows	West Cocoa	85.5	95.5	112.9
KSC Office Outside BDA	KSC	114.2	124.2	132.1
The Rock Church	Fontain Grant	84.4	94.4	111.3

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 16. Rocket Noise Metrics at Points of Interest: Super Heavy Nominal Landing: Annual Mean

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	90.1	97.7	112.5
SpaceX Operations Area	Merrit Island	95.6	103.5	116.9
Titusville Beach	Titusville	116.7	124.5	129.5
Playalinda Beach	Titusville	100.9	109.0	120.7
Kennedy Space Center Visitor Complex	Merrit Island	91.7	99.4	114.0
KSC Child Development Center	Merrit Island	92.3	100.0	114.3
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	91.3	98.9	113.9
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.7	94.1	110.4
Kings Park Estates - Courtenay	Courtenay	84.2	91.6	108.6
Jetty Park Campground	Cape Canaveral	81.1	88.2	106.1
Rockledge High School	Rockledge	74.8	81.7	102.1
Merritt Island	Merrit Island	76.0	83.0	102.8
Oak Park Elementary School	Titusville	81.1	88.3	106.8
Titusville High School	Titusville	84.6	92.0	109.2
Summerwood Villas	Titusville	83.4	90.7	108.3
Atlantis Elementary School	Port St. John	81.5	88.7	106.9
Fairglen Elementary School	Cocoa	80.3	87.5	106.0
Lewis Carroll Elementary School	Merritt Island	79.1	86.2	105.0
Cocoa	Cocoa	77.4	84.5	103.9
Cocoa Beach	Cocoa Beach	75.6	82.6	102.5
Pinegrove Estates	MIMS	79.9	87.1	106.0
Fern Meadows	West Cocoa	73.8	80.7	101.6
KSC Office Outside BDA	KSC	104.8	112.9	123.5
The Rock Church	Fontain Grant	76.2	83.2	103.5

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 17. Rocket Noise Metrics at Points of Interest: Super Heavy Nominal Landing: Summer Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	87.7	95.2	109.5
SpaceX Operations Area	Merrit Island	94.8	102.6	115.7
Titusville Beach	Titusville	113.2	120.8	126.6
Playalinda Beach	Titusville	104.3	112.4	124.0
Kennedy Space Center Visitor Complex	Merrit Island	91.0	98.7	112.8
KSC Child Development Center	Merrit Island	91.2	98.9	112.8
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	94.2	101.8	116.3
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.3	93.8	109.4
Kings Park Estates - Courtenay	Courtenay	83.5	90.9	107.2
Jetty Park Campground	Cape Canaveral	79.2	86.3	103.4
Rockledge High School	Rockledge	74.0	80.9	100.2
Merritt Island	Merrit Island	74.8	81.8	100.6
Oak Park Elementary School	Titusville	84.1	91.3	108.9
Titusville High School	Titusville	86.8	94.2	110.7
Summerwood Villas	Titusville	84.8	92.1	108.9
Atlantis Elementary School	Port St. John	82.2	89.4	106.7
Fairglen Elementary School	Cocoa	80.2	87.3	104.9
Lewis Carroll Elementary School	Merritt Island	78.2	85.2	103.1
Cocoa	Cocoa	76.9	83.9	102.4
Cocoa Beach	Cocoa Beach	74.1	81.1	99.9
Pinegrove Estates	MIMS	83.5	90.6	108.7
Fern Meadows	West Cocoa	73.8	80.7	100.5
KSC Office Outside BDA	KSC	104.1	112.1	123.1
The Rock Church	Fontain Grant	80.4	87.3	106.6

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 18. Rocket Noise Metrics at Points of Interest: Super Heavy Nominal Landing: Summer Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	89.0	96.6	110.9
SpaceX Operations Area	Merrit Island	94.0	101.8	114.9
Titusville Beach	Titusville	115.8	123.4	129.1
Playalinda Beach	Titusville	102.3	110.4	122.0
Kennedy Space Center Visitor Complex	Merrit Island	90.3	97.9	112.0
KSC Child Development Center	Merrit Island	90.8	98.5	112.4
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	91.6	99.2	113.7
Pine Island Conservation Area/Pine Island Estates	Merrit Island	85.4	92.9	108.5
Kings Park Estates - Courtenay	Courtenay	83.0	90.4	106.7
Jetty Park Campground	Cape Canaveral	80.2	87.4	104.5
Rockledge High School	Rockledge	74.0	80.9	100.2
Merritt Island	Merrit Island	75.2	82.2	101.0
Oak Park Elementary School	Titusville	81.5	88.7	106.3
Titusville High School	Titusville	84.5	91.9	108.3
Summerwood Villas	Titusville	82.9	90.2	106.9
Atlantis Elementary School	Port St. John	80.7	87.9	105.2
Fairglen Elementary School	Cocoa	79.4	86.5	104.1
Lewis Carroll Elementary School	Merritt Island	78.1	85.2	103.1
Cocoa	Cocoa	76.5	83.5	102.0
Cocoa Beach	Cocoa Beach	74.9	81.9	100.8
Pinegrove Estates	MIMS	80.9	88.0	106.1
Fern Meadows	West Cocoa	73.1	79.9	99.7
KSC Office Outside BDA	KSC	102.6	110.7	121.7
The Rock Church	Fontain Grant	77.8	84.7	104.0

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 19. Rocket Noise Metrics at Points of Interest: Super Heavy Nominal Landing: Winter Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	90.5	98.1	113.1
SpaceX Operations Area	Merrit Island	96.5	104.3	117.7
Titusville Beach	Titusville	117.3	125.2	129.7
Playalinda Beach	Titusville	100.4	108.5	120.1
Kennedy Space Center Visitor Complex	Merrit Island	92.3	100.0	114.8
KSC Child Development Center	Merrit Island	93.0	100.7	115.2
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	91.0	98.6	113.9
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.9	94.4	111.1
Kings Park Estates - Courtenay	Courtenay	84.4	91.8	109.4
Jetty Park Campground	Cape Canaveral	81.0	88.2	106.8
Rockledge High School	Rockledge	74.6	81.6	102.8
Merritt Island	Merrit Island	75.8	82.8	103.6
Oak Park Elementary School	Titusville	80.4	87.6	106.9
Titusville High School	Titusville	84.3	91.7	109.5
Summerwood Villas	Titusville	83.3	90.6	108.8
Atlantis Elementary School	Port St. John	81.4	88.7	107.5
Fairglen Elementary School	Cocoa	80.3	87.5	106.7
Lewis Carroll Elementary School	Merritt Island	79.1	86.2	105.8
Cocoa	Cocoa	77.3	84.4	104.7
Cocoa Beach	Cocoa Beach	75.3	82.4	103.1
Pinegrove Estates	MIMS	78.9	86.1	105.8
Fern Meadows	West Cocoa	73.5	80.4	102.3
KSC Office Outside BDA	KSC	106.1	114.3	124.3
The Rock Church	Fontain Grant	74.9	81.8	103.1

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 20. Rocket Noise Metrics at Points of Interest: Super Heavy Nominal Landing: Winter Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	92.2	99.8	114.8
SpaceX Operations Area	Merrit Island	96.6	104.4	117.8
Titusville Beach	Titusville	119.4	127.3	131.8
Playalinda Beach	Titusville	98.5	106.6	118.1
Kennedy Space Center Visitor Complex	Merrit Island	92.5	100.2	114.9
KSC Child Development Center	Merrit Island	93.4	101.1	115.6
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	89.1	96.8	112.0
Pine Island Conservation Area/Pine Island Estates	Merrit Island	87.0	94.5	111.1
Kings Park Estates - Courtenay	Courtenay	84.8	92.2	109.7
Jetty Park Campground	Cape Canaveral	82.6	89.8	108.3
Rockledge High School	Rockledge	75.4	82.3	103.6
Merritt Island	Merrit Island	76.9	83.9	104.6
Oak Park Elementary School	Titusville	78.7	85.9	105.1
Titusville High School	Titusville	82.8	90.3	108.0
Summerwood Villas	Titusville	82.3	89.7	107.8
Atlantis Elementary School	Port St. John	81.0	88.2	107.0
Fairglen Elementary School	Cocoa	80.5	87.7	106.8
Lewis Carroll Elementary School	Merritt Island	79.9	87.0	106.5
Cocoa	Cocoa	77.8	84.9	105.1
Cocoa Beach	Cocoa Beach	76.8	83.8	104.5
Pinegrove Estates	MIMS	77.0	84.2	103.9
Fern Meadows	West Cocoa	73.7	80.6	102.4
KSC Office Outside BDA	KSC	105.6	113.8	123.8
The Rock Church	Fontain Grant	72.8	79.8	101.0

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 21. Rocket Noise Metrics at Points of Interest: Super Heavy (40-Degree) Landing: Annual Mean

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	89.7	97.3	112.2
SpaceX Operations Area	Merrit Island	95.2	103.1	116.5
Titusville Beach	Titusville	115.5	123.7	129.2
Playalinda Beach	Titusville	101.7	109.7	121.2
Kennedy Space Center Visitor Complex	Merrit Island	91.3	99.1	113.7
KSC Child Development Center	Merrit Island	91.8	99.6	114.1
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	91.3	99.0	113.9
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.3	93.8	110.1
Kings Park Estates - Courtenay	Courtenay	83.9	91.3	108.4
Jetty Park Campground	Cape Canaveral	80.7	88.0	105.9
Rockledge High School	Rockledge	74.5	81.5	102.0
Merritt Island	Merrit Island	75.7	82.8	102.7
Oak Park Elementary School	Titusville	81.1	88.3	106.8
Titusville High School	Titusville	84.5	91.9	109.1
Summerwood Villas	Titusville	83.2	90.6	108.2
Atlantis Elementary School	Port St. John	81.3	88.5	106.7
Fairglen Elementary School	Cocoa	80.0	87.3	105.8
Lewis Carroll Elementary School	Merritt Island	78.8	86.0	104.8
Cocoa	Cocoa	77.2	84.3	103.8
Cocoa Beach	Cocoa Beach	75.3	82.4	102.3
Pinegrove Estates	MIMS	80.0	87.1	106.0
Fern Meadows	West Cocoa	73.5	80.5	101.4
KSC Office Outside BDA	KSC	104.3	112.4	123.1
The Rock Church	Fontain Grant	76.4	83.3	103.6

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 22. Rocket Noise Metrics at Points of Interest: Super Heavy (40-Degree) Landing: Summer Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	87.2	94.9	109.2
SpaceX Operations Area	Merrit Island	94.3	102.2	115.4
Titusville Beach	Titusville	111.5	119.9	126.3
Playalinda Beach	Titusville	105.1	113.1	124.5
Kennedy Space Center Visitor Complex	Merrit Island	90.7	98.4	112.6
KSC Child Development Center	Merrit Island	90.8	98.5	112.5
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	94.2	101.9	116.3
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.0	93.5	109.2
Kings Park Estates - Courtenay	Courtenay	83.2	90.7	107.0
Jetty Park Campground	Cape Canaveral	78.8	86.1	103.2
Rockledge High School	Rockledge	73.8	80.7	100.1
Merritt Island	Merrit Island	74.5	81.5	100.4
Oak Park Elementary School	Titusville	84.1	91.2	108.9
Titusville High School	Titusville	86.8	94.1	110.6
Summerwood Villas	Titusville	84.6	92.0	108.8
Atlantis Elementary School	Port St. John	81.9	89.2	106.5
Fairglen Elementary School	Cocoa	79.9	87.1	104.7
Lewis Carroll Elementary School	Merritt Island	77.9	85.0	102.9
Cocoa	Cocoa	76.6	83.7	102.2
Cocoa Beach	Cocoa Beach	73.8	80.8	99.7
Pinegrove Estates	MIMS	83.6	90.7	108.7
Fern Meadows	West Cocoa	73.6	80.5	100.3
KSC Office Outside BDA	KSC	103.6	111.6	122.8
The Rock Church	Fontain Grant	80.5	87.4	106.6

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 23. Rocket Noise Metrics at Points of Interest: Super Heavy (40-Degree) Landing: Summer Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	88.6	96.2	110.6
SpaceX Operations Area	Merrit Island	93.5	101.4	114.6
Titusville Beach	Titusville	114.1	122.5	128.9
Playalinda Beach	Titusville	103.1	111.1	122.5
Kennedy Space Center Visitor Complex	Merrit Island	89.9	97.6	111.8
KSC Child Development Center	Merrit Island	90.3	98.1	112.1
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	91.6	99.3	113.7
Pine Island Conservation Area/Pine Island Estates	Merrit Island	85.1	92.6	108.3
Kings Park Estates - Courtenay	Courtenay	82.7	90.1	106.5
Jetty Park Campground	Cape Canaveral	79.9	87.1	104.3
Rockledge High School	Rockledge	73.7	80.7	100.1
Merritt Island	Merrit Island	74.9	82.0	100.9
Oak Park Elementary School	Titusville	81.5	88.7	106.3
Titusville High School	Titusville	84.4	91.8	108.3
Summerwood Villas	Titusville	82.7	90.0	106.8
Atlantis Elementary School	Port St. John	80.5	87.7	105.1
Fairglen Elementary School	Cocoa	79.1	86.3	103.9
Lewis Carroll Elementary School	Merritt Island	77.8	85.0	102.9
Cocoa	Cocoa	76.3	83.3	101.9
Cocoa Beach	Cocoa Beach	74.7	81.7	100.6
Pinegrove Estates	MIMS	81.0	88.1	106.1
Fern Meadows	West Cocoa	72.8	79.8	99.6
KSC Office Outside BDA	KSC	102.2	110.2	121.3
The Rock Church	Fontain Grant	77.9	84.8	104.1

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 24. Rocket Noise Metrics at Points of Interest: Super Heavy (40-Degree) Landing: Winter Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	90.0	97.7	112.8
SpaceX Operations Area	Merrit Island	96.0	103.9	117.4
Titusville Beach	Titusville	116.3	124.4	129.4
Playalinda Beach	Titusville	101.1	109.2	120.5
Kennedy Space Center Visitor Complex	Merrit Island	91.9	99.6	114.5
KSC Child Development Center	Merrit Island	92.5	100.3	114.9
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	91.0	98.7	113.9
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.6	94.1	110.9
Kings Park Estates - Courtenay	Courtenay	84.1	91.6	109.2
Jetty Park Campground	Cape Canaveral	80.6	88.0	106.6
Rockledge High School	Rockledge	74.3	81.3	102.7
Merritt Island	Merrit Island	75.5	82.6	103.4
Oak Park Elementary School	Titusville	80.4	87.6	106.9
Titusville High School	Titusville	84.2	91.6	109.4
Summerwood Villas	Titusville	83.1	90.5	108.6
Atlantis Elementary School	Port St. John	81.2	88.5	107.3
Fairglen Elementary School	Cocoa	80.0	87.3	106.5
Lewis Carroll Elementary School	Merritt Island	78.8	86.0	105.6
Cocoa	Cocoa	77.0	84.2	104.5
Cocoa Beach	Cocoa Beach	75.0	82.1	103.0
Pinegrove Estates	MIMS	79.0	86.2	105.9
Fern Meadows	West Cocoa	73.3	80.3	102.2
KSC Office Outside BDA	KSC	105.6	113.7	124.0
The Rock Church	Fontain Grant	75.0	81.9	103.2

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 25. Rocket Noise Metrics at Points of Interest: Super Heavy (40-Degree) Landing: Winter Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	91.7	99.4	114.5
SpaceX Operations Area	Merrit Island	96.1	104.0	117.5
Titusville Beach	Titusville	118.5	126.5	131.6
Playalinda Beach	Titusville	99.2	107.3	118.6
Kennedy Space Center Visitor Complex	Merrit Island	92.0	99.8	114.7
KSC Child Development Center	Merrit Island	92.9	100.7	115.3
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	89.2	96.8	112.0
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.6	94.2	110.9
Kings Park Estates - Courtenay	Courtenay	84.5	91.9	109.5
Jetty Park Campground	Cape Canaveral	82.2	89.5	108.1
Rockledge High School	Rockledge	75.1	82.1	103.4
Merritt Island	Merrit Island	76.6	83.7	104.4
Oak Park Elementary School	Titusville	78.7	85.9	105.1
Titusville High School	Titusville	82.8	90.2	107.9
Summerwood Villas	Titusville	82.1	89.5	107.7
Atlantis Elementary School	Port St. John	80.7	88.0	106.8
Fairglen Elementary School	Cocoa	80.2	87.4	106.6
Lewis Carroll Elementary School	Merritt Island	79.5	86.7	106.3
Cocoa	Cocoa	77.5	84.7	105.0
Cocoa Beach	Cocoa Beach	76.4	83.5	104.3
Pinegrove Estates	MIMS	77.1	84.2	103.9
Fern Meadows	West Cocoa	73.5	80.4	102.3
KSC Office Outside BDA	KSC	105.1	113.3	123.5
The Rock Church	Fontain Grant	72.9	79.9	101.1

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 26. Rocket Noise Metrics at Points of Interest: Super Heavy (115-Degree) Landing: Annual Mean

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	90.5	98.0	112.8
SpaceX Operations Area	Merrit Island	95.7	103.6	116.9
Titusville Beach	Titusville	119.0	125.9	130.2
Playalinda Beach	Titusville	100.4	108.6	120.3
Kennedy Space Center Visitor Complex	Merrit Island	91.9	99.5	114.0
KSC Child Development Center	Merrit Island	92.5	100.2	114.5
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	91.0	98.7	113.7
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.7	94.2	110.4
Kings Park Estates - Courtenay	Courtenay	84.4	91.7	108.7
Jetty Park Campground	Cape Canaveral	81.4	88.5	106.3
Rockledge High School	Rockledge	75.0	81.8	102.2
Merritt Island	Merrit Island	76.2	83.1	102.9
Oak Park Elementary School	Titusville	80.9	88.2	106.7
Titusville High School	Titusville	84.5	91.9	109.1
Summerwood Villas	Titusville	83.3	90.7	108.2
Atlantis Elementary School	Port St. John	81.5	88.7	106.9
Fairglen Elementary School	Cocoa	80.4	87.6	106.0
Lewis Carroll Elementary School	Merritt Island	79.3	86.4	105.1
Cocoa	Cocoa	77.6	84.6	104.0
Cocoa Beach	Cocoa Beach	75.9	82.8	102.6
Pinegrove Estates	MIMS	79.7	86.9	105.9
Fern Meadows	West Cocoa	73.9	80.7	101.6
KSC Office Outside BDA	KSC	104.7	112.8	123.4
The Rock Church	Fontain Grant	76.0	83.0	103.4

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 27. Rocket Noise Metrics at Points of Interest: Super Heavy (115-Degree) Landing: Summer Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	88.1	95.5	109.8
SpaceX Operations Area	Merrit Island	94.9	102.7	115.8
Titusville Beach	Titusville	115.5	122.2	127.3
Playalinda Beach	Titusville	103.9	112.0	123.6
Kennedy Space Center Visitor Complex	Merrit Island	91.2	98.8	112.9
KSC Child Development Center	Merrit Island	91.4	99.0	112.9
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	93.9	101.5	116.1
Pine Island Conservation Area/Pine Island Estates	Merrit Island	86.4	93.9	109.4
Kings Park Estates - Courtenay	Courtenay	83.7	91.0	107.3
Jetty Park Campground	Cape Canaveral	79.5	86.5	103.6
Rockledge High School	Rockledge	74.2	81.0	100.3
Merritt Island	Merrit Island	75.0	81.9	100.7
Oak Park Elementary School	Titusville	83.9	91.1	108.8
Titusville High School	Titusville	86.7	94.1	110.6
Summerwood Villas	Titusville	84.7	92.1	108.8
Atlantis Elementary School	Port St. John	82.2	89.4	106.7
Fairglen Elementary School	Cocoa	80.3	87.4	105.0
Lewis Carroll Elementary School	Merritt Island	78.3	85.4	103.2
Cocoa	Cocoa	77.1	84.0	102.5
Cocoa Beach	Cocoa Beach	74.3	81.2	100.0
Pinegrove Estates	MIMS	83.3	90.5	108.5
Fern Meadows	West Cocoa	73.9	80.8	100.5
KSC Office Outside BDA	KSC	103.9	112.0	123.0
The Rock Church	Fontain Grant	80.1	87.1	106.4

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 28. Rocket Noise Metrics at Points of Interest: Super Heavy (115-Degree) Landing: Summer Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	89.4	96.9	111.2
SpaceX Operations Area	Merrit Island	94.1	101.9	115.0
Titusville Beach	Titusville	118.1	124.8	129.9
Playalinda Beach	Titusville	101.9	110.0	121.7
Kennedy Space Center Visitor Complex	Merrit Island	90.4	98.0	112.1
KSC Child Development Center	Merrit Island	90.9	98.6	112.5
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	91.3	99.0	113.5
Pine Island Conservation Area/Pine Island Estates	Merrit Island	85.5	93.0	108.6
Kings Park Estates - Courtenay	Courtenay	83.2	90.5	106.8
Jetty Park Campground	Cape Canaveral	80.5	87.6	104.7
Rockledge High School	Rockledge	74.2	81.0	100.3
Merritt Island	Merrit Island	75.4	82.3	101.1
Oak Park Elementary School	Titusville	81.4	88.6	106.2
Titusville High School	Titusville	84.3	91.7	108.2
Summerwood Villas	Titusville	82.8	90.1	106.9
Atlantis Elementary School	Port St. John	80.7	87.9	105.2
Fairglen Elementary School	Cocoa	79.5	86.6	104.2
Lewis Carroll Elementary School	Merritt Island	78.3	85.3	103.2
Cocoa	Cocoa	76.7	83.7	102.1
Cocoa Beach	Cocoa Beach	75.2	82.1	100.9
Pinegrove Estates	MIMS	80.7	87.8	105.9
Fern Meadows	West Cocoa	73.2	80.0	99.8
KSC Office Outside BDA	KSC	102.5	110.6	121.6
The Rock Church	Fontain Grant	77.6	84.5	103.9

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 29. Rocket Noise Metrics at Points of Interest: Super Heavy (115-Degree) Landing: Winter Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	90.9	98.4	113.4
SpaceX Operations Area	Merrit Island	96.6	104.4	117.8
Titusville Beach	Titusville	119.6	126.5	130.4
Playalinda Beach	Titusville	99.9	108.1	119.7
Kennedy Space Center Visitor Complex	Merrit Island	92.5	100.1	114.9
KSC Child Development Center	Merrit Island	93.2	100.8	115.3
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	90.7	98.3	113.7
Pine Island Conservation Area/Pine Island Estates	Merrit Island	87.0	94.5	111.2
Kings Park Estates - Courtenay	Courtenay	84.6	92.0	109.5
Jetty Park Campground	Cape Canaveral	81.4	88.5	107.0
Rockledge High School	Rockledge	74.8	81.7	102.9
Merritt Island	Merrit Island	76.1	83.0	103.7
Oak Park Elementary School	Titusville	80.2	87.5	106.7
Titusville High School	Titusville	84.1	91.6	109.4
Summerwood Villas	Titusville	83.2	90.6	108.7
Atlantis Elementary School	Port St. John	81.4	88.7	107.5
Fairglen Elementary School	Cocoa	80.5	87.6	106.8
Lewis Carroll Elementary School	Merritt Island	79.3	86.4	105.9
Cocoa	Cocoa	77.5	84.5	104.8
Cocoa Beach	Cocoa Beach	75.6	82.6	103.3
Pinegrove Estates	MIMS	78.7	85.9	105.7
Fern Meadows	West Cocoa	73.6	80.5	102.3
KSC Office Outside BDA	KSC	105.9	114.2	124.2
The Rock Church	Fontain Grant	74.6	81.7	103.0

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 30. Rocket Noise Metrics at Points of Interest: Super Heavy (115-Degree) Landing: Winter Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	92.7	100.1	115.1
SpaceX Operations Area	Merrit Island	96.7	104.5	117.9
Titusville Beach	Titusville	121.7	128.6	132.6
Playalinda Beach	Titusville	98.0	106.1	117.7
Kennedy Space Center Visitor Complex	Merrit Island	92.6	100.3	115.0
KSC Child Development Center	Merrit Island	93.6	101.3	115.7
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	88.8	96.5	111.8
Pine Island Conservation Area/Pine Island Estates	Merrit Island	87.1	94.5	111.2
Kings Park Estates - Courtenay	Courtenay	85.0	92.3	109.8
Jetty Park Campground	Cape Canaveral	82.9	90.0	108.5
Rockledge High School	Rockledge	75.6	82.4	103.7
Merritt Island	Merrit Island	77.2	84.1	104.7
Oak Park Elementary School	Titusville	78.5	85.8	105.0
Titusville High School	Titusville	82.7	90.1	107.9
Summerwood Villas	Titusville	82.2	89.6	107.7
Atlantis Elementary School	Port St. John	81.0	88.2	107.0
Fairglen Elementary School	Cocoa	80.6	87.7	106.8
Lewis Carroll Elementary School	Merritt Island	80.1	87.1	106.6
Cocoa	Cocoa	78.0	85.0	105.2
Cocoa Beach	Cocoa Beach	77.0	84.0	104.6
Pinegrove Estates	MIMS	76.8	84.0	103.7
Fern Meadows	West Cocoa	73.8	80.7	102.5
KSC Office Outside BDA	KSC	105.5	113.8	123.7
The Rock Church	Fontain Grant	72.6	79.6	100.9

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 31. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Landing: Annual Mean

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	80.0	84.7	103.6
SpaceX Operations Area	Merrit Island	86.8	91.6	108.6
Titusville Beach	Titusville	109.0	115.2	123.3
Playalinda Beach	Titusville	91.5	96.9	112.1
Kennedy Space Center Visitor Complex	Merrit Island	82.1	86.7	105.3
KSC Child Development Center	Merrit Island	82.8	87.4	105.7
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	81.0	85.6	104.9
Pine Island Conservation Area/Pine Island Estates	Merrit Island	76.1	80.6	101.3
Kings Park Estates - Courtenay	Courtenay	73.4	77.8	99.4
Jetty Park Campground	Cape Canaveral	69.6	74.1	96.7
Rockledge High School	Rockledge	62.6	66.9	92.8
Merritt Island	Merrit Island	63.9	68.3	93.5
Oak Park Elementary School	Titusville	69.5	73.9	97.2
Titusville High School	Titusville	73.6	78.0	99.8
Summerwood Villas	Titusville	72.3	76.7	98.9
Atlantis Elementary School	Port St. John	70.1	74.5	97.4
Fairglen Elementary School	Cocoa	68.9	73.2	96.5
Lewis Carroll Elementary School	Merritt Island	67.5	71.8	95.5
Cocoa	Cocoa	65.6	69.9	94.5
Cocoa Beach	Cocoa Beach	63.6	68.0	93.1
Pinegrove Estates	MIMS	68.1	72.4	96.4
Fern Meadows	West Cocoa	61.5	65.8	92.4
KSC Office Outside BDA	KSC	97.7	103.1	116.4
The Rock Church	Fontain Grant	63.8	68.1	94.1

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 32. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Landing: Summer Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	77.5	82.2	100.6
SpaceX Operations Area	Merrit Island	86.0	90.8	107.5
Titusville Beach	Titusville	104.9	111.3	120.4
Playalinda Beach	Titusville	94.9	100.3	115.3
Kennedy Space Center Visitor Complex	Merrit Island	81.4	86.1	104.2
KSC Child Development Center	Merrit Island	81.6	86.3	104.2
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	83.9	88.5	107.3
Pine Island Conservation Area/Pine Island Estates	Merrit Island	75.8	80.3	100.3
Kings Park Estates - Courtenay	Courtenay	72.6	77.1	97.9
Jetty Park Campground	Cape Canaveral	67.7	72.1	93.9
Rockledge High School	Rockledge	61.7	66.0	90.7
Merritt Island	Merrit Island	62.6	67.0	91.0
Oak Park Elementary School	Titusville	72.4	76.7	99.2
Titusville High School	Titusville	75.8	80.2	101.3
Summerwood Villas	Titusville	73.7	78.0	99.5
Atlantis Elementary School	Port St. John	70.8	75.1	97.2
Fairglen Elementary School	Cocoa	68.7	73.0	95.4
Lewis Carroll Elementary School	Merritt Island	66.4	70.8	93.5
Cocoa	Cocoa	65.0	69.3	92.8
Cocoa Beach	Cocoa Beach	62.0	66.4	90.3
Pinegrove Estates	MIMS	71.6	75.9	98.9
Fern Meadows	West Cocoa	61.4	65.7	91.0
KSC Office Outside BDA	KSC	97.0	102.4	116.2
The Rock Church	Fountain Grant	67.9	72.1	96.9

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 33. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Landing: Summer Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	78.9	83.5	101.9
SpaceX Operations Area	Merrit Island	85.1	89.9	106.6
Titusville Beach	Titusville	107.6	113.9	123.0
Playalinda Beach	Titusville	92.9	98.3	113.3
Kennedy Space Center Visitor Complex	Merrit Island	80.6	85.2	103.4
KSC Child Development Center	Merrit Island	81.2	85.8	103.7
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	81.3	85.9	104.7
Pine Island Conservation Area/Pine Island Estates	Merrit Island	74.9	79.3	99.4
Kings Park Estates - Courtenay	Courtenay	72.1	76.5	97.4
Jetty Park Campground	Cape Canaveral	68.7	73.1	94.9
Rockledge High School	Rockledge	61.7	66.0	90.7
Merritt Island	Merrit Island	63.0	67.4	91.4
Oak Park Elementary School	Titusville	69.9	74.2	96.7
Titusville High School	Titusville	73.4	77.8	98.9
Summerwood Villas	Titusville	71.7	76.1	97.5
Atlantis Elementary School	Port St. John	69.3	73.6	95.7
Fairglen Elementary School	Cocoa	67.8	72.2	94.6
Lewis Carroll Elementary School	Merritt Island	66.4	70.7	93.5
Cocoa	Cocoa	64.6	68.9	92.4
Cocoa Beach	Cocoa Beach	62.8	67.2	91.1
Pinegrove Estates	MIMS	69.0	73.3	96.3
Fern Meadows	West Cocoa	60.6	64.9	90.3
KSC Office Outside BDA	KSC	95.5	100.8	114.6
The Rock Church	Fontain Grant	65.3	69.6	94.4

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 34. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Landing: Winter Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	80.4	85.1	104.3
SpaceX Operations Area	Merrit Island	87.6	92.4	109.5
Titusville Beach	Titusville	109.5	115.8	123.5
Playalinda Beach	Titusville	91.0	96.3	111.4
Kennedy Space Center Visitor Complex	Merrit Island	82.7	87.3	106.2
KSC Child Development Center	Merrit Island	83.4	88.1	106.6
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	80.7	85.3	105.0
Pine Island Conservation Area/Pine Island Estates	Merrit Island	76.5	81.0	102.1
Kings Park Estates - Courtenay	Courtenay	73.6	78.1	100.2
Jetty Park Campground	Cape Canaveral	69.7	74.1	97.4
Rockledge High School	Rockledge	62.5	66.9	93.8
Merritt Island	Merrit Island	63.8	68.2	94.5
Oak Park Elementary School	Titusville	68.9	73.2	97.4
Titusville High School	Titusville	73.3	77.8	100.2
Summerwood Villas	Titusville	72.2	76.6	99.5
Atlantis Elementary School	Port St. John	70.1	74.5	98.1
Fairglen Elementary School	Cocoa	68.9	73.3	97.4
Lewis Carroll Elementary School	Merritt Island	67.5	71.9	96.5
Cocoa	Cocoa	65.6	69.9	95.5
Cocoa Beach	Cocoa Beach	63.4	67.9	94.0
Pinegrove Estates	MIMS	67.1	71.5	96.4
Fern Meadows	West Cocoa	61.3	65.6	93.3
KSC Office Outside BDA	KSC	99.0	104.3	117.2
The Rock Church	Fontain Grant	62.5	66.9	93.9

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 35. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Landing: Winter Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	82.1	86.8	105.9
SpaceX Operations Area	Merrit Island	87.6	92.4	109.4
Titusville Beach	Titusville	111.7	117.9	125.6
Playalinda Beach	Titusville	89.0	94.4	109.5
Kennedy Space Center Visitor Complex	Merrit Island	82.8	87.4	106.2
KSC Child Development Center	Merrit Island	83.8	88.5	107.0
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	78.8	83.4	103.0
Pine Island Conservation Area/Pine Island Estates	Merrit Island	76.5	81.0	102.1
Kings Park Estates - Courtenay	Courtenay	74.0	78.4	100.5
Jetty Park Campground	Cape Canaveral	71.2	75.6	98.9
Rockledge High School	Rockledge	63.2	67.6	94.5
Merritt Island	Merrit Island	64.9	69.3	95.5
Oak Park Elementary School	Titusville	67.1	71.5	95.7
Titusville High School	Titusville	71.9	76.3	98.7
Summerwood Villas	Titusville	71.2	75.6	98.4
Atlantis Elementary School	Port St. John	69.6	74.1	97.6
Fairglen Elementary School	Cocoa	69.0	73.4	97.4
Lewis Carroll Elementary School	Merritt Island	68.2	72.6	97.2
Cocoa	Cocoa	66.0	70.4	95.9
Cocoa Beach	Cocoa Beach	64.8	69.2	95.3
Pinegrove Estates	MIMS	65.2	69.5	94.4
Fern Meadows	West Cocoa	61.5	65.8	93.5
KSC Office Outside BDA	KSC	98.5	103.8	116.6
The Rock Church	Fontain Grant	60.5	64.8	91.8

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 36. Rocket Noise Metrics at Points of Interest: Super Heavy Static Fire Test: Annual Mean

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	76.7	88.4	116.9
SpaceX Operations Area	Merrit Island	83.5	95.3	121.2
Titusville Beach	Titusville	107.5	119.2	134.9
Playalinda Beach	Titusville	91.7	103.5	125.1
Kennedy Space Center Visitor Complex	Merrit Island	78.7	90.5	118.5
KSC Child Development Center	Merrit Island	79.3	91.1	118.8
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	78.1	89.8	118.5
Pine Island Conservation Area/Pine Island Estates	Merrit Island	73.2	84.9	115.1
Kings Park Estates - Courtenay	Courtenay	70.8	82.5	113.5
Jetty Park Campground	Cape Canaveral	67.6	79.4	111.1
Rockledge High School	Rockledge	61.9	73.7	107.5
Merritt Island	Merrit Island	63.0	74.8	108.1
Oak Park Elementary School	Titusville	68.0	79.8	111.9
Titusville High School	Titusville	71.3	83.1	114.1
Summerwood Villas	Titusville	70.2	81.9	113.3
Atlantis Elementary School	Port St. John	68.3	80.1	111.9
Fairglen Elementary School	Cocoa	67.2	78.9	111.0
Lewis Carroll Elementary School	Merritt Island	66.0	77.7	110.1
Cocoa	Cocoa	64.4	76.2	109.2
Cocoa Beach	Cocoa Beach	62.8	74.6	107.7
Pinegrove Estates	MIMS	66.9	78.7	111.2
Fern Meadows	West Cocoa	61.0	72.8	107.1
KSC Office Outside BDA	KSC	95.2	106.9	128.2
The Rock Church	Fontain Grant	63.4	75.1	108.9

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 37. Rocket Noise Metrics at Points of Interest: Super Heavy Static Fire Test: Summer Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	73.7	85.5	113.7
SpaceX Operations Area	Merrit Island	82.5	94.2	119.9
Titusville Beach	Titusville	103.9	115.6	132.0
Playalinda Beach	Titusville	95.1	106.8	128.3
Kennedy Space Center Visitor Complex	Merrit Island	77.7	89.4	117.2
KSC Child Development Center	Merrit Island	77.8	89.6	117.1
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	80.5	92.2	120.7
Pine Island Conservation Area/Pine Island Estates	Merrit Island	72.2	83.9	113.9
Kings Park Estates - Courtenay	Courtenay	69.3	81.1	111.8
Jetty Park Campground	Cape Canaveral	64.9	76.6	108.1
Rockledge High School	Rockledge	60.0	71.8	105.4
Merritt Island	Merrit Island	60.8	72.5	105.6
Oak Park Elementary School	Titusville	70.1	81.8	113.7
Titusville High School	Titusville	72.7	84.5	115.4
Summerwood Villas	Titusville	70.8	82.5	113.6
Atlantis Elementary School	Port St. John	68.1	79.9	111.5
Fairglen Elementary School	Cocoa	66.1	77.9	109.7
Lewis Carroll Elementary School	Merritt Island	64.0	75.8	108.0
Cocoa	Cocoa	62.9	74.6	107.4
Cocoa Beach	Cocoa Beach	60.2	72.0	104.9
Pinegrove Estates	MIMS	69.5	81.3	113.6
Fern Meadows	West Cocoa	59.9	71.7	105.7
KSC Office Outside BDA	KSC	94.8	106.6	127.8
The Rock Church	Fontain Grant	66.4	78.2	111.7

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 38. Rocket Noise Metrics at Points of Interest: Super Heavy Static Fire Test: Summer Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	75.1	86.9	115.1
SpaceX Operations Area	Merrit Island	81.7	93.4	119.1
Titusville Beach	Titusville	106.5	118.3	134.6
Playalinda Beach	Titusville	93.0	104.8	126.3
Kennedy Space Center Visitor Complex	Merrit Island	76.8	88.6	116.4
KSC Child Development Center	Merrit Island	77.4	89.1	116.7
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	77.9	89.7	118.1
Pine Island Conservation Area/Pine Island Estates	Merrit Island	71.3	83.0	113.0
Kings Park Estates - Courtenay	Courtenay	68.8	80.6	111.3
Jetty Park Campground	Cape Canaveral	65.9	77.7	109.2
Rockledge High School	Rockledge	60.0	71.8	105.4
Merritt Island	Merrit Island	61.2	72.9	106.0
Oak Park Elementary School	Titusville	67.5	79.3	111.2
Titusville High School	Titusville	70.4	82.1	113.0
Summerwood Villas	Titusville	68.8	80.6	111.7
Atlantis Elementary School	Port St. John	66.7	78.4	110.0
Fairglen Elementary School	Cocoa	65.3	77.1	109.0
Lewis Carroll Elementary School	Merritt Island	64.0	75.8	108.0
Cocoa	Cocoa	62.5	74.3	107.0
Cocoa Beach	Cocoa Beach	61.1	72.9	105.7
Pinegrove Estates	MIMS	66.9	78.7	111.0
Fern Meadows	West Cocoa	59.2	70.9	105.0
KSC Office Outside BDA	KSC	93.4	105.1	126.3
The Rock Church	Fontain Grant	63.9	75.6	109.2

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 39. Rocket Noise Metrics at Points of Interest: Super Heavy Static Fire Test: Winter Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	77.3	89.0	117.7
SpaceX Operations Area	Merrit Island	84.4	96.1	122.3
Titusville Beach	Titusville	107.7	119.5	135.1
Playalinda Beach	Titusville	91.1	102.8	124.5
Kennedy Space Center Visitor Complex	Merrit Island	79.5	91.3	119.5
KSC Child Development Center	Merrit Island	80.2	91.9	119.8
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	78.1	89.8	118.7
Pine Island Conservation Area/Pine Island Estates	Merrit Island	74.0	85.7	116.1
Kings Park Estates - Courtenay	Courtenay	71.6	83.4	114.5
Jetty Park Campground	Cape Canaveral	68.3	80.1	111.9
Rockledge High School	Rockledge	62.7	74.4	108.5
Merritt Island	Merrit Island	63.7	75.5	109.1
Oak Park Elementary School	Titusville	68.1	79.9	112.2
Titusville High School	Titusville	71.6	83.4	114.6
Summerwood Villas	Titusville	70.7	82.5	114.0
Atlantis Elementary School	Port St. John	69.0	80.8	112.8
Fairglen Elementary School	Cocoa	68.0	79.7	112.0
Lewis Carroll Elementary School	Merritt Island	66.8	78.5	111.1
Cocoa	Cocoa	65.2	77.0	110.2
Cocoa Beach	Cocoa Beach	63.5	75.2	108.6
Pinegrove Estates	MIMS	66.8	78.5	111.3
Fern Meadows	West Cocoa	61.7	73.5	108.1
KSC Office Outside BDA	KSC	96.0	107.8	129.1
The Rock Church	Fontain Grant	63.0	74.7	108.8

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 40. Rocket Noise Metrics at Points of Interest: Super Heavy Static Fire Test: Winter Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	79.0	90.7	119.4
SpaceX Operations Area	Merrit Island	84.4	96.2	122.3
Titusville Beach	Titusville	109.8	121.6	137.2
Playalinda Beach	Titusville	89.1	100.8	122.6
Kennedy Space Center Visitor Complex	Merrit Island	79.7	91.5	119.6
KSC Child Development Center	Merrit Island	80.6	92.3	120.2
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	76.1	87.9	116.8
Pine Island Conservation Area/Pine Island Estates	Merrit Island	74.0	85.7	116.1
Kings Park Estates - Courtenay	Courtenay	72.0	83.7	114.8
Jetty Park Campground	Cape Canaveral	69.8	81.6	113.4
Rockledge High School	Rockledge	63.4	75.1	109.2
Merritt Island	Merrit Island	64.8	76.6	110.1
Oak Park Elementary School	Titusville	66.4	78.1	110.5
Titusville High School	Titusville	70.1	81.9	113.1
Summerwood Villas	Titusville	69.7	81.5	113.0
Atlantis Elementary School	Port St. John	68.5	80.3	112.3
Fairglen Elementary School	Cocoa	68.0	79.8	112.1
Lewis Carroll Elementary School	Merritt Island	67.5	79.2	111.8
Cocoa	Cocoa	65.7	77.4	110.6
Cocoa Beach	Cocoa Beach	64.8	76.6	110.0
Pinegrove Estates	MIMS	64.8	76.5	109.3
Fern Meadows	West Cocoa	61.9	73.6	108.2
KSC Office Outside BDA	KSC	95.5	107.3	128.6
The Rock Church	Fontain Grant	60.9	72.6	106.7

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 41. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Static Fire Test: Annual Mean

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	71.0	82.8	111.2
SpaceX Operations Area	Merrit Island	77.9	89.7	115.6
Titusville Beach	Titusville	101.8	113.6	129.3
Playalinda Beach	Titusville	86.1	97.8	119.4
Kennedy Space Center Visitor Complex	Merrit Island	73.1	84.8	112.8
KSC Child Development Center	Merrit Island	73.7	85.4	113.2
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	72.4	84.2	112.9
Pine Island Conservation Area/Pine Island Estates	Merrit Island	67.5	79.3	109.5
Kings Park Estates - Courtenay	Courtenay	65.1	76.9	107.8
Jetty Park Campground	Cape Canaveral	62.0	73.7	105.4
Rockledge High School	Rockledge	56.3	68.0	101.9
Merritt Island	Merrit Island	57.4	69.1	102.5
Oak Park Elementary School	Titusville	62.4	74.1	106.3
Titusville High School	Titusville	65.7	77.4	108.5
Summerwood Villas	Titusville	64.5	76.3	107.6
Atlantis Elementary School	Port St. John	62.7	74.4	106.3
Fairglen Elementary School	Cocoa	61.5	73.3	105.4
Lewis Carroll Elementary School	Merritt Island	60.3	72.1	104.4
Cocoa	Cocoa	58.8	70.6	103.5
Cocoa Beach	Cocoa Beach	57.2	68.9	102.0
Pinegrove Estates	MIMS	61.3	73.0	105.5
Fern Meadows	West Cocoa	55.4	67.1	101.4
KSC Office Outside BDA	KSC	89.5	101.3	122.5
The Rock Church	Fontain Grant	57.7	69.5	103.3

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 42. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Static Fire Test: Summer Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	68.1	79.8	108.1
SpaceX Operations Area	Merrit Island	76.8	88.6	114.3
Titusville Beach	Titusville	98.2	110.0	126.4
Playalinda Beach	Titusville	89.4	101.2	122.6
Kennedy Space Center Visitor Complex	Merrit Island	72.0	83.8	111.5
KSC Child Development Center	Merrit Island	72.2	83.9	111.4
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	74.8	86.6	115.1
Pine Island Conservation Area/Pine Island Estates	Merrit Island	66.5	78.3	108.3
Kings Park Estates - Courtenay	Courtenay	63.7	75.4	106.2
Jetty Park Campground	Cape Canaveral	59.2	71.0	102.4
Rockledge High School	Rockledge	54.4	66.1	99.7
Merritt Island	Merrit Island	55.1	66.9	100.0
Oak Park Elementary School	Titusville	64.4	76.2	108.1
Titusville High School	Titusville	67.1	78.8	109.7
Summerwood Villas	Titusville	65.1	76.9	108.0
Atlantis Elementary School	Port St. John	62.5	74.2	105.8
Fairglen Elementary School	Cocoa	60.4	72.2	104.1
Lewis Carroll Elementary School	Merritt Island	58.4	70.1	102.3
Cocoa	Cocoa	57.2	69.0	101.7
Cocoa Beach	Cocoa Beach	54.6	66.4	99.2
Pinegrove Estates	MIMS	63.9	75.6	107.9
Fern Meadows	West Cocoa	54.3	66.0	100.1
KSC Office Outside BDA	KSC	89.1	100.9	122.1
The Rock Church	Fontain Grant	60.8	72.5	106.1

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 43. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Static Fire Test: Summer Night

Point of Interest	City/ Community	L _{Amax} (dBA)	ASEL (dBA)	L _{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	69.4	81.2	109.5
SpaceX Operations Area	Merrit Island	76.0	87.8	113.5
Titusville Beach	Titusville	100.8	112.6	128.9
Playalinda Beach	Titusville	87.4	99.1	120.6
Kennedy Space Center Visitor Complex	Merrit Island	71.2	82.9	110.7
KSC Child Development Center	Merrit Island	71.7	83.5	111.0
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	72.2	84.0	112.5
Pine Island Conservation Area/Pine Island Estates	Merrit Island	65.6	77.4	107.4
Kings Park Estates - Courtenay	Courtenay	63.2	74.9	105.7
Jetty Park Campground	Cape Canaveral	60.3	72.0	103.5
Rockledge High School	Rockledge	54.4	66.1	99.7
Merritt Island	Merrit Island	55.5	67.3	100.4
Oak Park Elementary School	Titusville	61.9	73.6	105.6
Titusville High School	Titusville	64.7	76.5	107.4
Summerwood Villas	Titusville	63.2	74.9	106.0
Atlantis Elementary School	Port St. John	61.0	72.8	104.4
Fairglen Elementary School	Cocoa	59.6	71.4	103.3
Lewis Carroll Elementary School	Merritt Island	58.4	70.1	102.3
Cocoa	Cocoa	56.9	68.6	101.4
Cocoa Beach	Cocoa Beach	55.5	67.2	100.1
Pinegrove Estates	MIMS	61.3	73.0	105.3
Fern Meadows	West Cocoa	53.5	65.3	99.3
KSC Office Outside BDA	KSC	87.7	99.5	120.7
The Rock Church	Fontain Grant	58.2	70.0	103.5

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 44. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Static Fire Test: Winter Day

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	71.6	83.4	112.1
SpaceX Operations Area	Merrit Island	78.7	90.5	116.6
Titusville Beach	Titusville	102.0	113.8	129.5
Playalinda Beach	Titusville	85.4	97.2	118.9
Kennedy Space Center Visitor Complex	Merrit Island	73.9	85.6	113.8
KSC Child Development Center	Merrit Island	74.5	86.3	114.2
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	72.4	84.2	113.1
Pine Island Conservation Area/Pine Island Estates	Merrit Island	68.3	80.1	110.4
Kings Park Estates - Courtenay	Courtenay	66.0	77.7	108.8
Jetty Park Campground	Cape Canaveral	62.7	74.4	106.3
Rockledge High School	Rockledge	57.0	68.8	102.9
Merritt Island	Merrit Island	58.1	69.9	103.4
Oak Park Elementary School	Titusville	62.5	74.2	106.6
Titusville High School	Titusville	66.0	77.7	109.0
Summerwood Villas	Titusville	65.1	76.8	108.3
Atlantis Elementary School	Port St. John	63.3	75.1	107.1
Fairglen Elementary School	Cocoa	62.3	74.1	106.4
Lewis Carroll Elementary School	Merritt Island	61.1	72.9	105.4
Cocoa	Cocoa	59.6	71.3	104.5
Cocoa Beach	Cocoa Beach	57.8	69.6	103.0
Pinegrove Estates	MIMS	61.1	72.9	105.6
Fern Meadows	West Cocoa	56.1	67.8	102.4
KSC Office Outside BDA	KSC	90.4	102.1	123.4
The Rock Church	Fontain Grant	57.3	69.1	103.1

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

Table 45. Rocket Noise Metrics at Points of Interest: Starship Spacecraft Static Fire Test: Winter Night

Point of Interest	City/ Community	L_{Amax} (dBA)	ASEL (dBA)	L_{max} (dB)
Cape Canaveral Space Force Station (CCSFS)	Cape Canaveral	73.3	85.1	113.7
SpaceX Operations Area	Merrit Island	78.8	90.5	116.7
Titusville Beach	Titusville	104.2	115.9	131.6
Playalinda Beach	Titusville	83.4	95.2	116.9
Kennedy Space Center Visitor Complex	Merrit Island	74.0	85.8	113.9
KSC Child Development Center	Merrit Island	74.9	86.7	114.6
Merritt Island National Wildlife Refuge Visitor Center	Merrit Island	70.5	82.2	111.2
Pine Island Conservation Area/Pine Island Estates	Merrit Island	68.3	80.1	110.4
Kings Park Estates - Courtenay	Courtenay	66.3	78.1	109.1
Jetty Park Campground	Cape Canaveral	64.1	75.9	107.8
Rockledge High School	Rockledge	57.7	69.5	103.6
Merritt Island	Merrit Island	59.1	70.9	104.5
Oak Park Elementary School	Titusville	60.7	72.5	104.8
Titusville High School	Titusville	64.5	76.3	107.5
Summerwood Villas	Titusville	64.1	75.8	107.3
Atlantis Elementary School	Port St. John	62.8	74.6	106.6
Fairglen Elementary School	Cocoa	62.4	74.2	106.4
Lewis Carroll Elementary School	Merritt Island	61.8	73.6	106.2
Cocoa	Cocoa	60.0	71.8	104.9
Cocoa Beach	Cocoa Beach	59.2	70.9	104.3
Pinegrove Estates	MIMS	59.1	70.9	103.6
Fern Meadows	West Cocoa	56.2	68.0	102.5
KSC Office Outside BDA	KSC	89.9	101.6	122.9
The Rock Church	Fontain Grant	55.2	67.0	101.0

Notes: L_{Amax} = Maximum A-weighted Sound Level; dBA = A-weighted decibels. ASEL = A-weighted Sound Exposure Level; dB = decibels.

3.2 SINGLE EVENT SONIC BOOM EXPOSURE RESULTS AT LC-39A

3.2.1 Single Event Sonic Boom Contour Figures: Overpressure (psf): Mean Annual

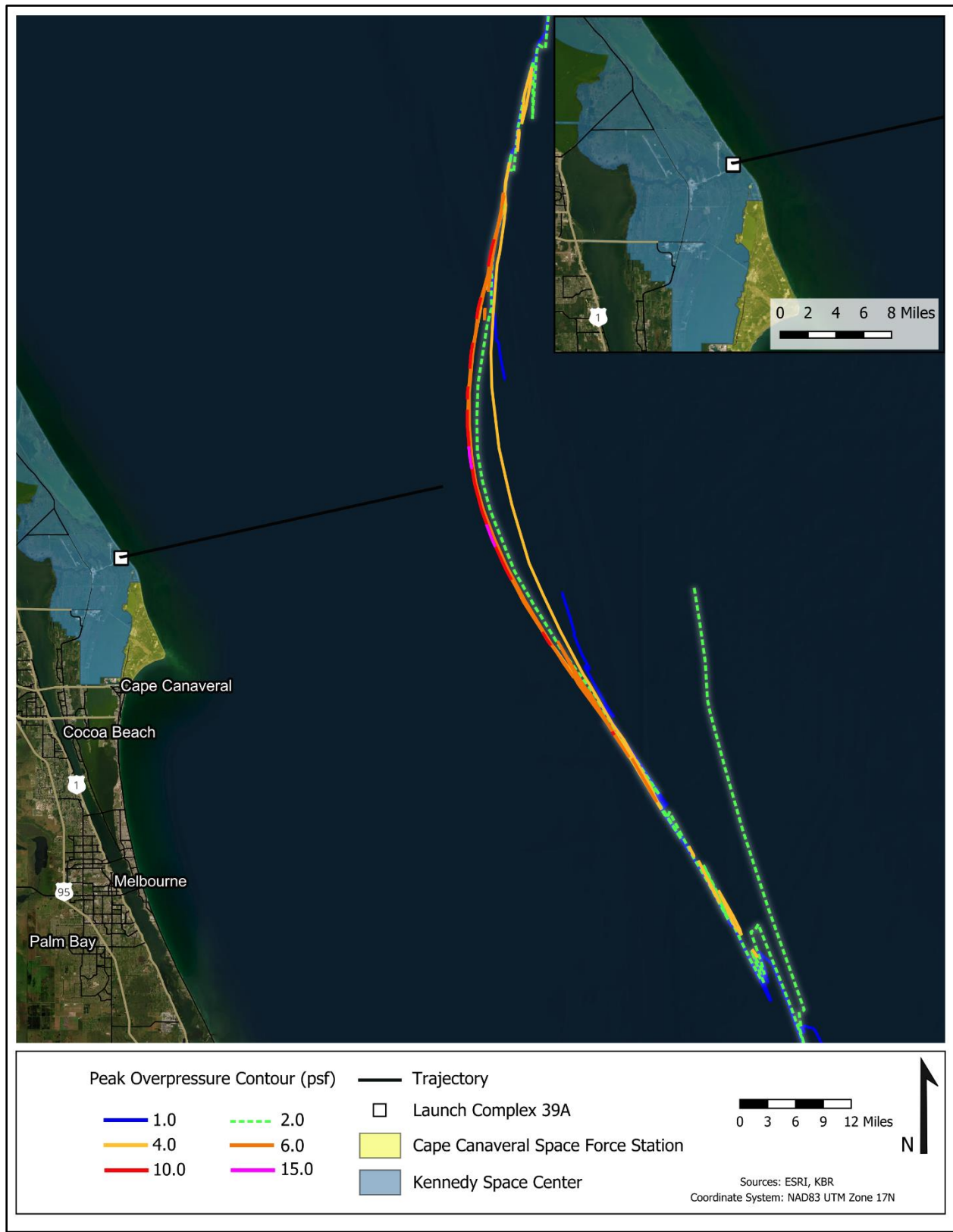


Figure 145. Sonic Boom from Starship Launch at LC-39A: psf Contours: Mean Annual

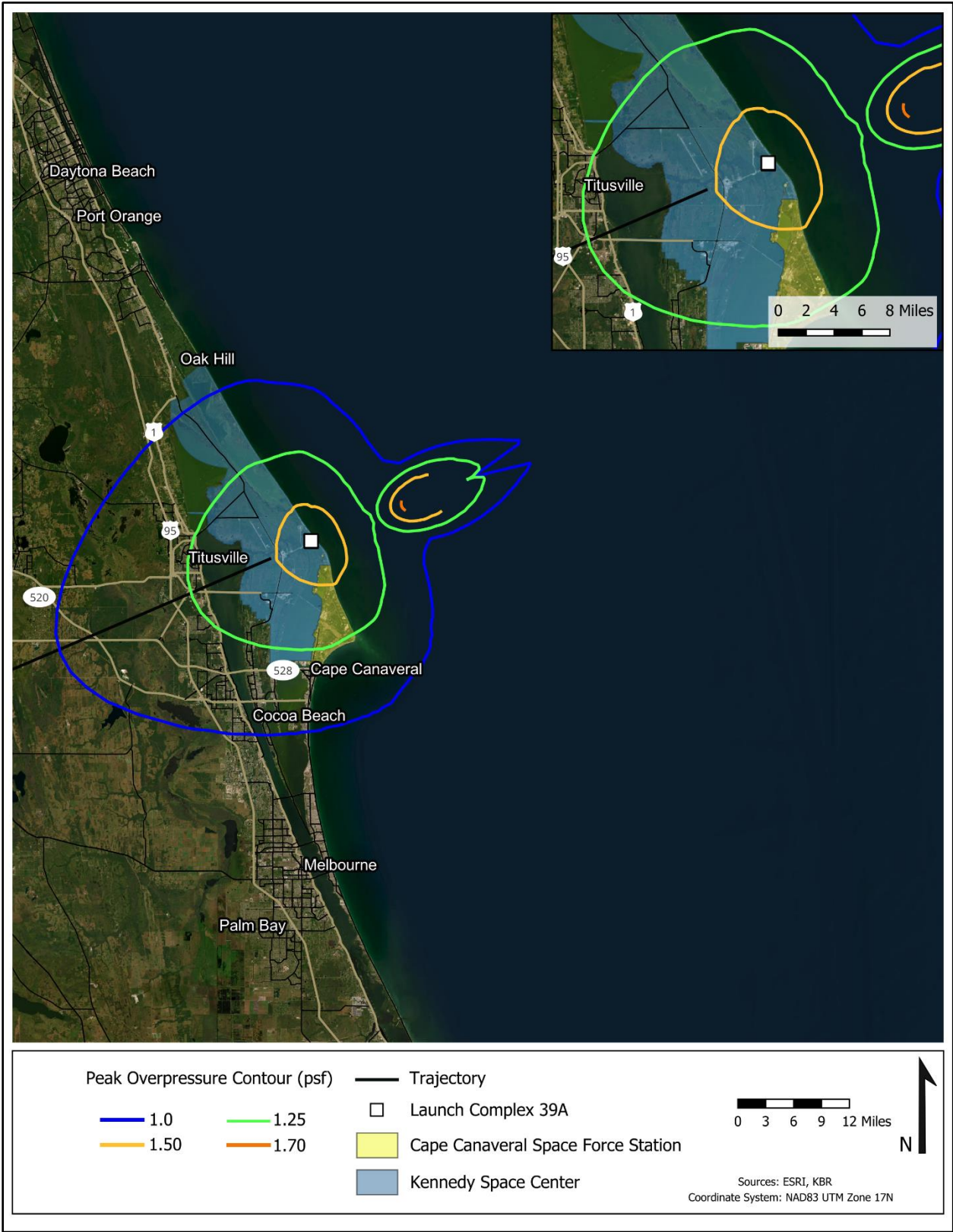


Figure 146. Sonic Boom from Starship Spacecraft Descent at LC-39A: psf Contours: Mean Annual

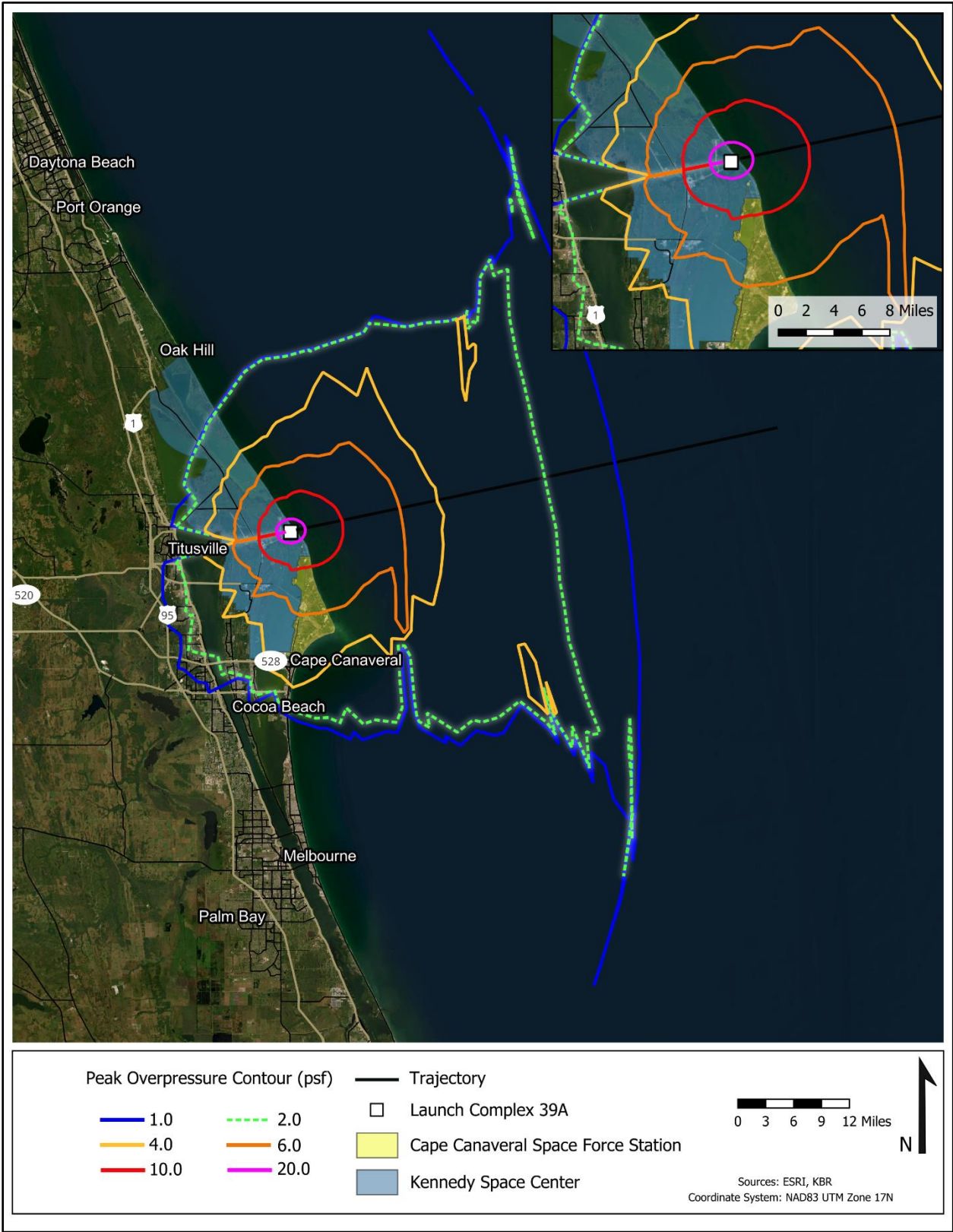


Figure 147. Sonic Boom from Super Heavy Descent (Nominal) at LC-39A: psf Contours: Mean Annual

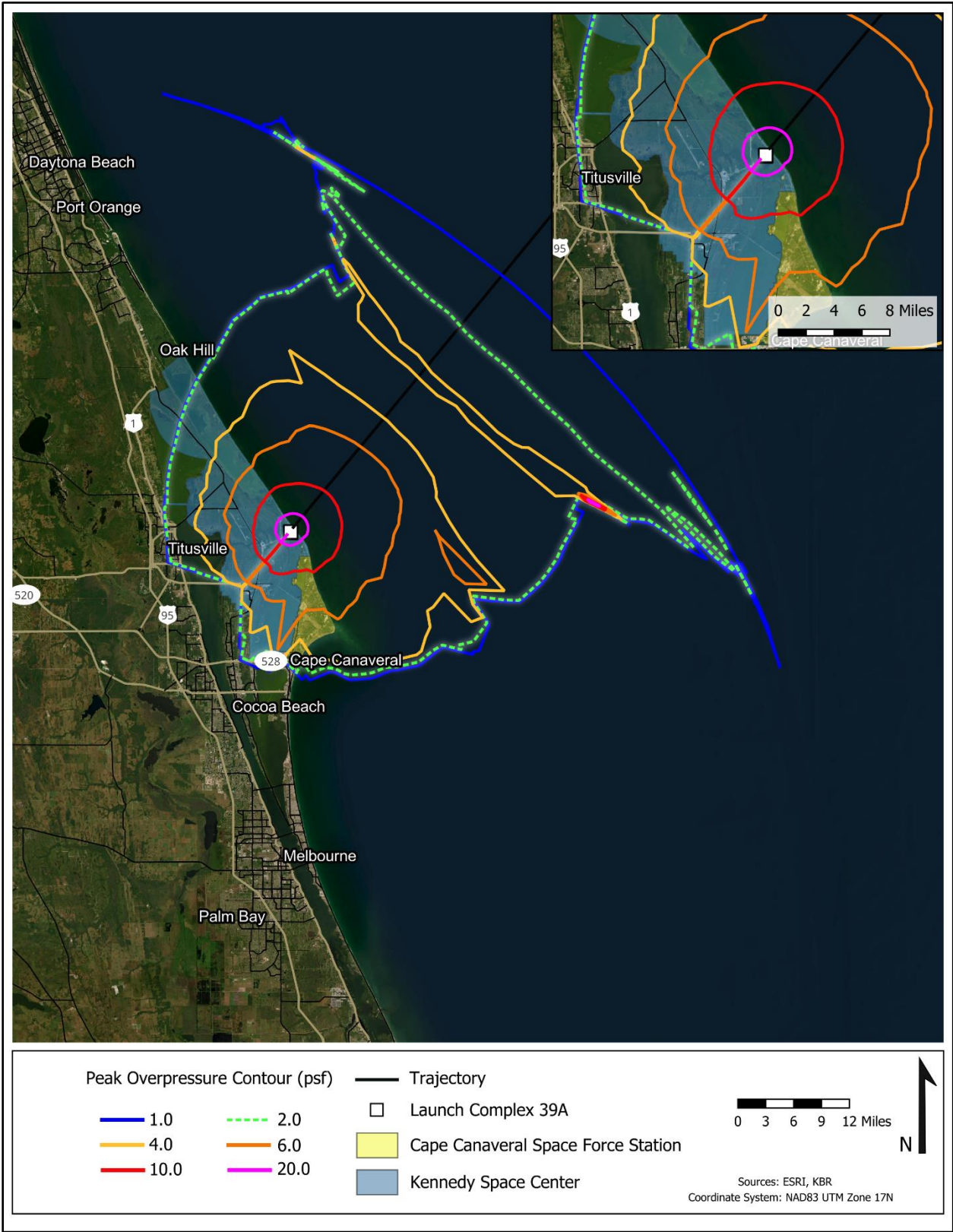


Figure 148. Sonic Boom from Super Heavy Descent (40-Deg) at LC-39A: psf Contours: Mean Annual

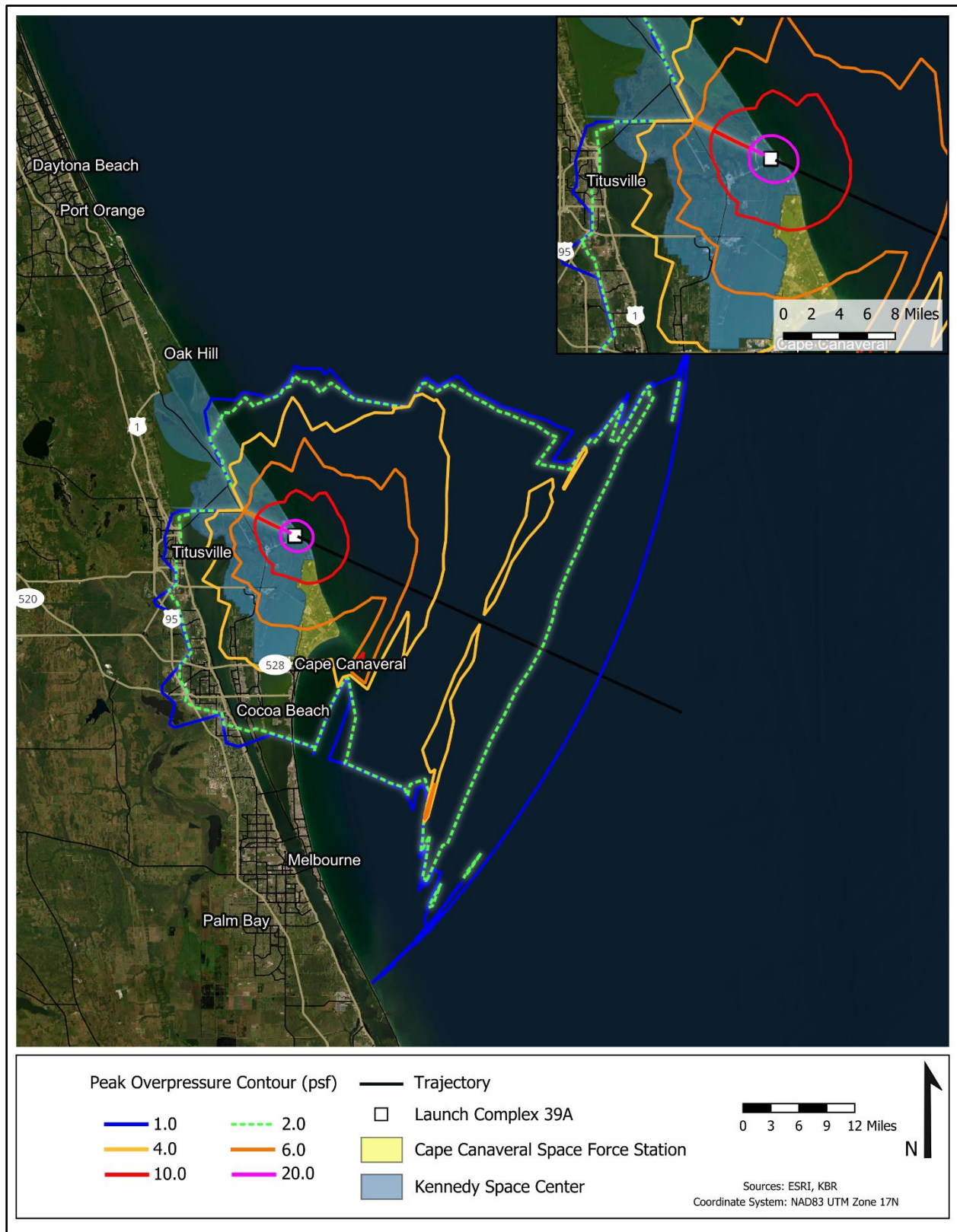


Figure 149. Sonic Boom from Super Heavy Descent (115-Deg) at LC-39A: psf Contours: Mean Annual

3.2.2 Overpressure Contour Figures: Summer Day

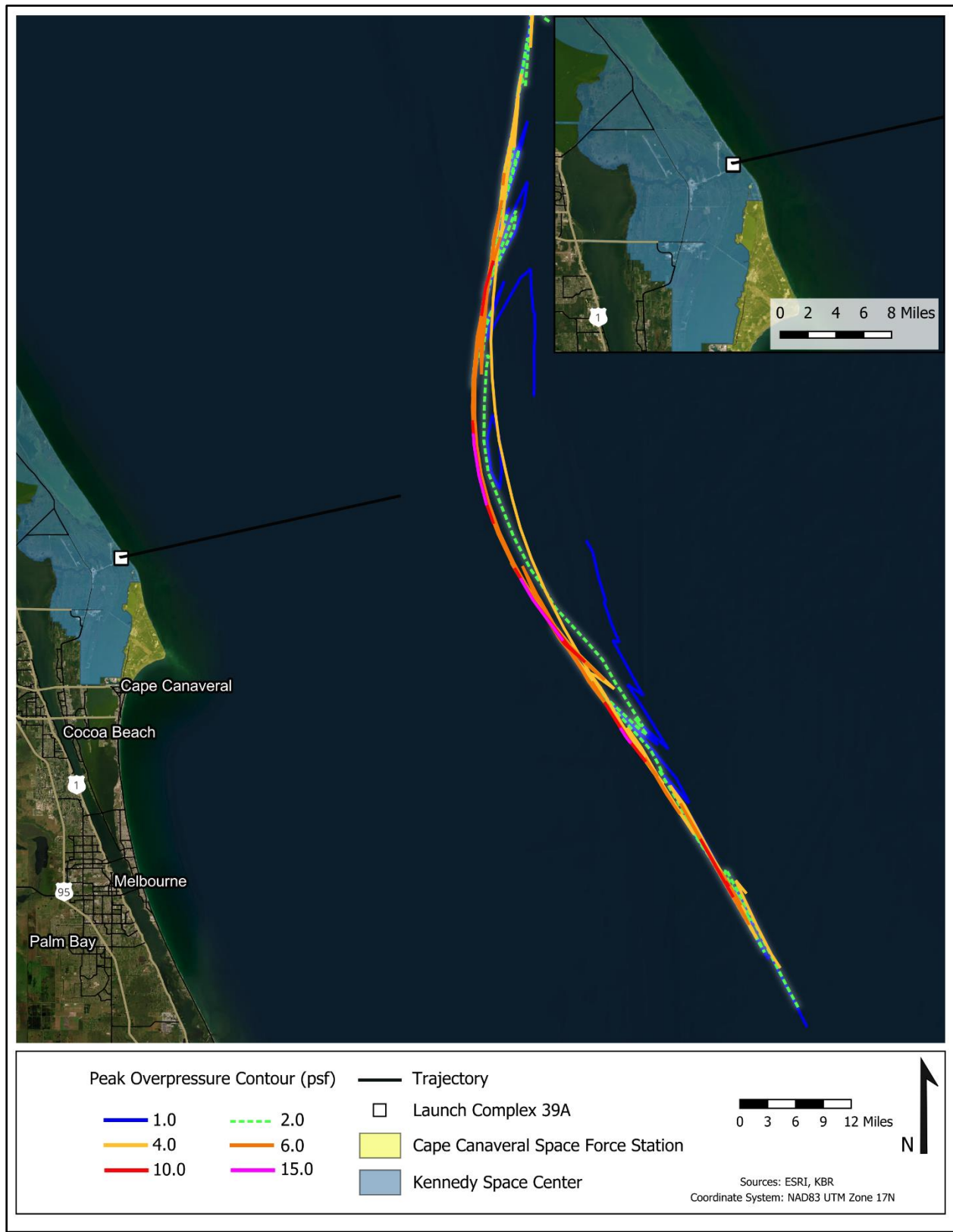


Figure 150. Sonic Boom from Starship Launch at LC-39A: psf Contours: Summer Day

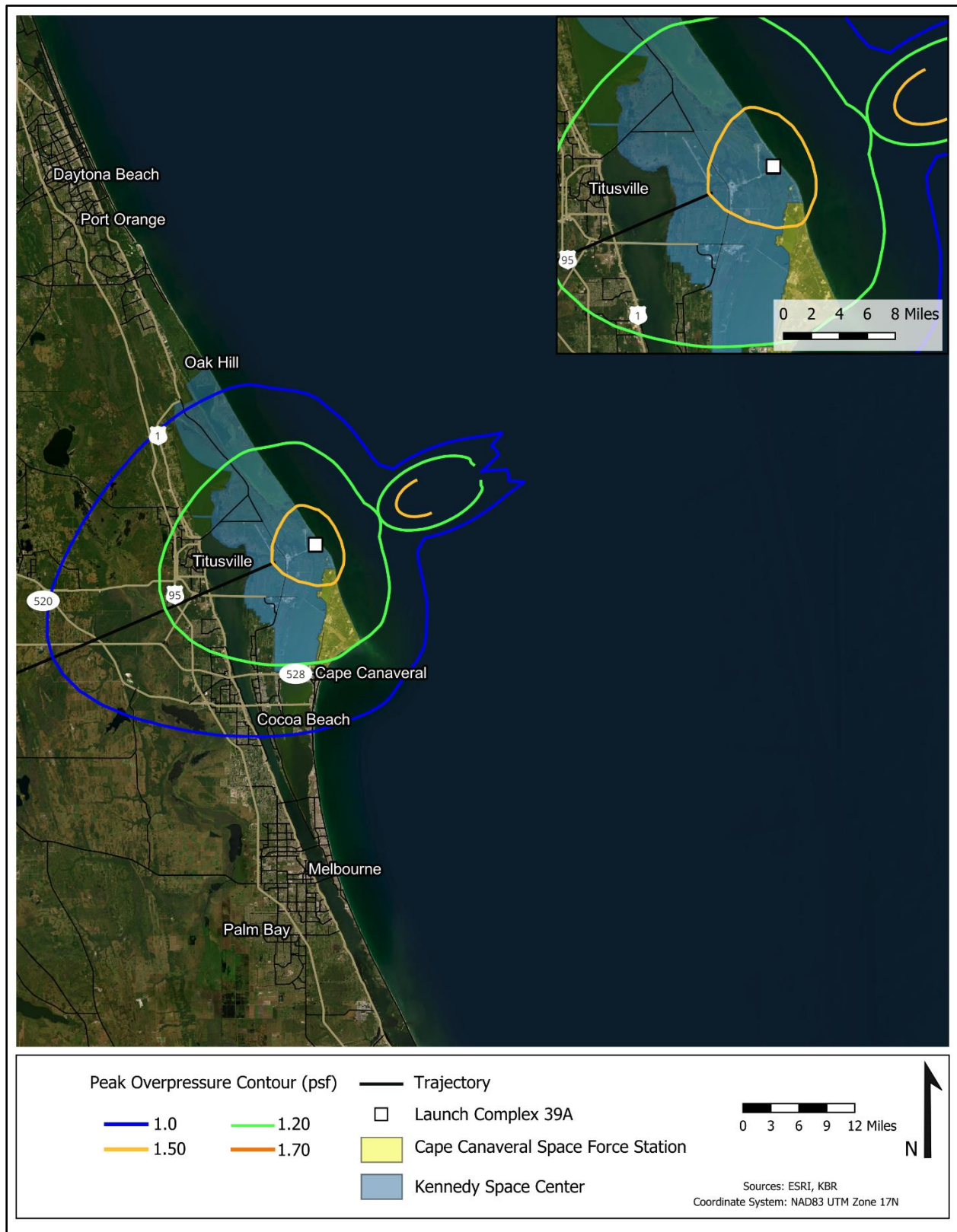


Figure 151. Sonic Boom from Starship Spacecraft Descent at LC-39A: psf Contours: Summer Day

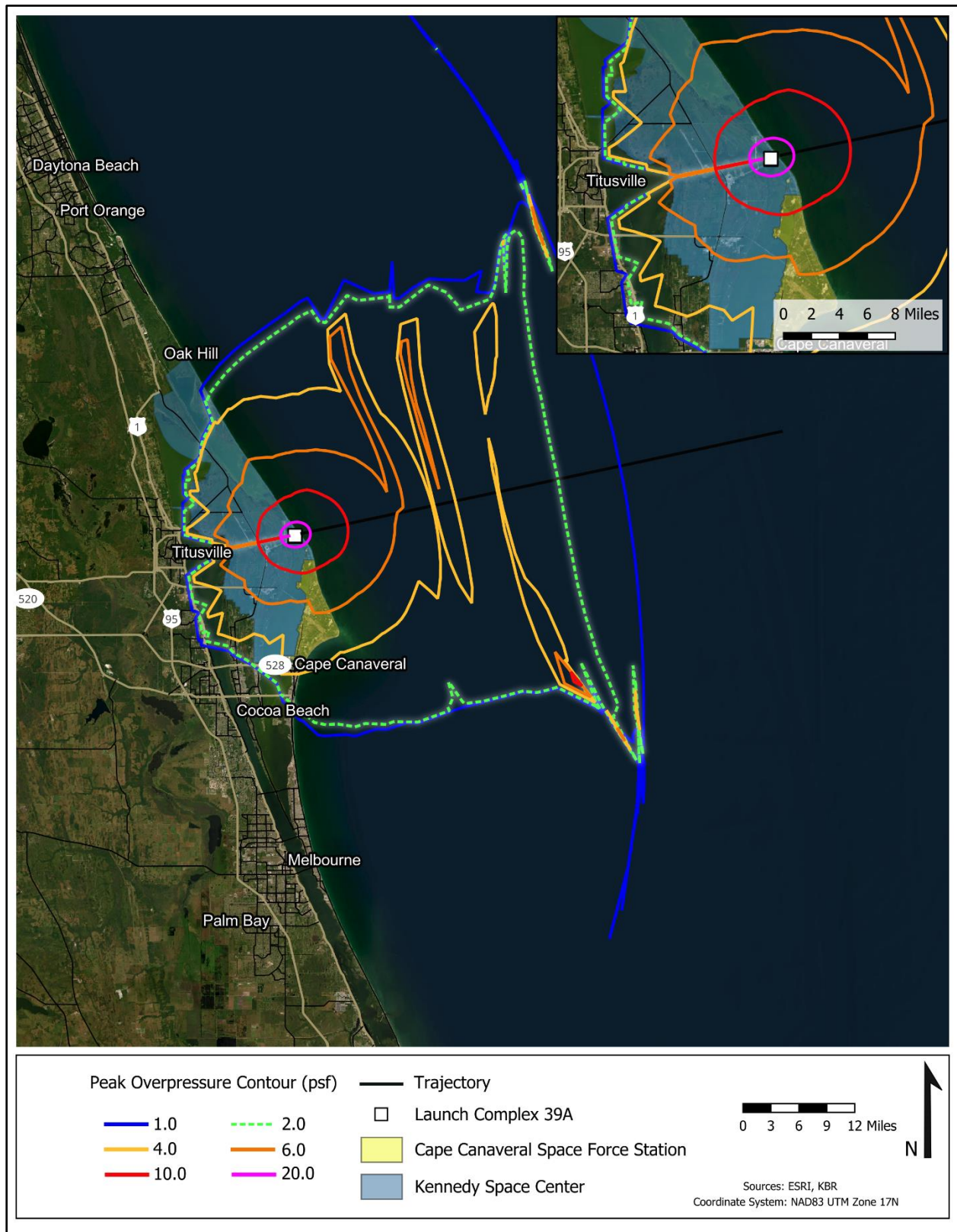


Figure 152. Sonic Boom from Super Heavy Descent (Nominal) at LC-39A: psf Contours: Summer Day

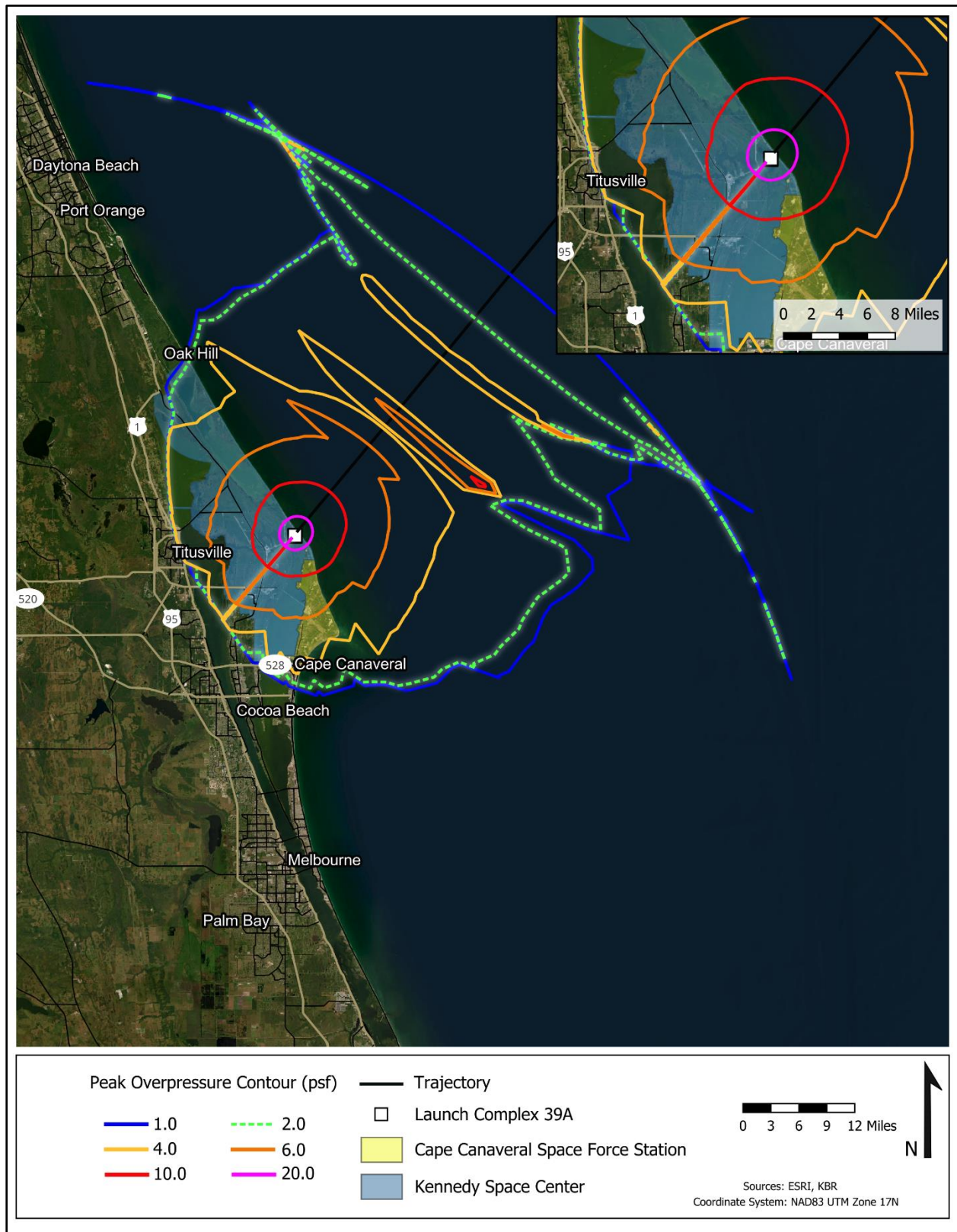


Figure 153. Sonic Boom from Super Heavy Descent (40-Deg) at LC-39A: psf Contours: Summer Day

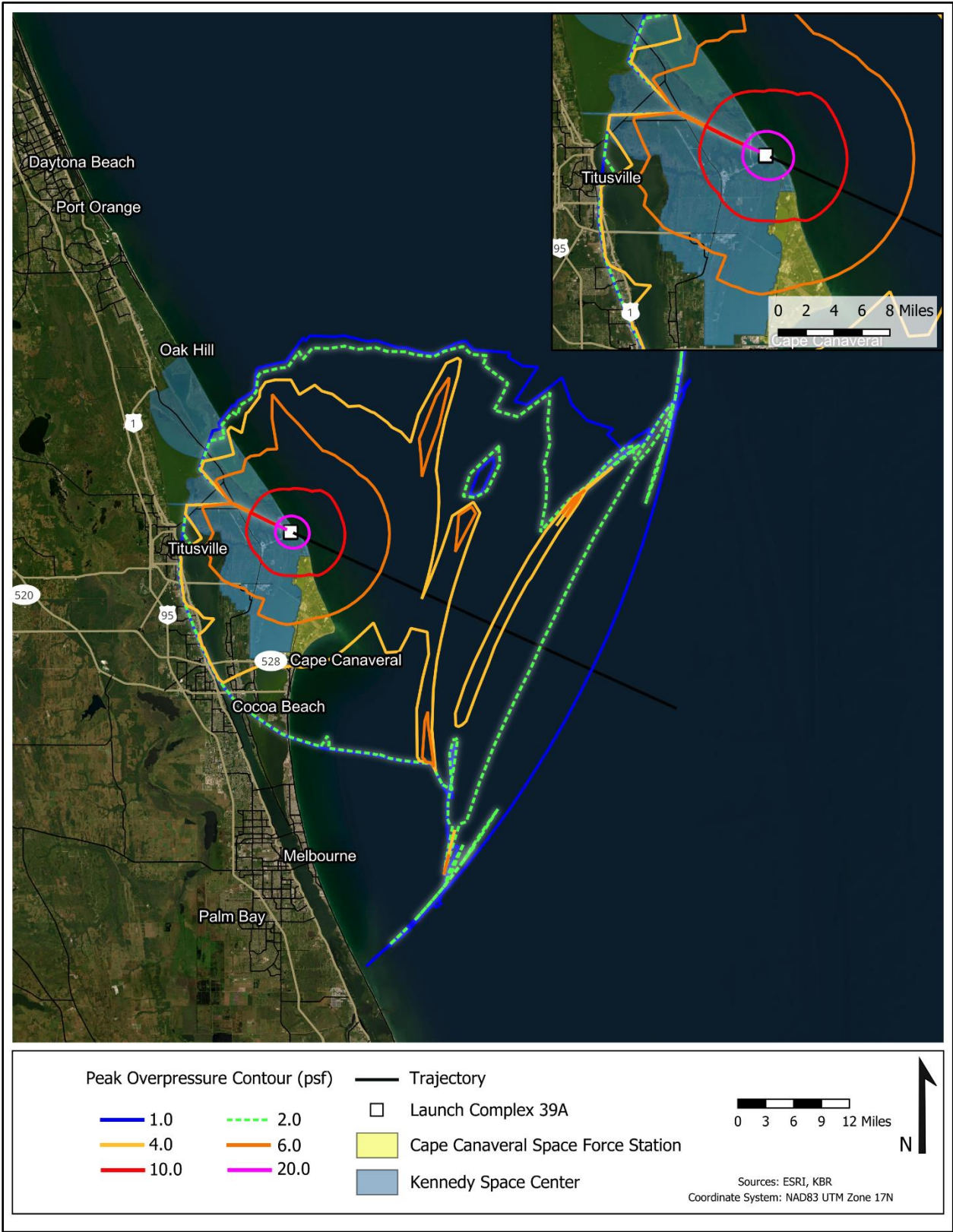


Figure 154. Sonic Boom from Super Heavy Descent (115-Deg) at LC-39A: psf Contours: Summer Day

3.2.3 Overpressure Contour Figures: Summer Night

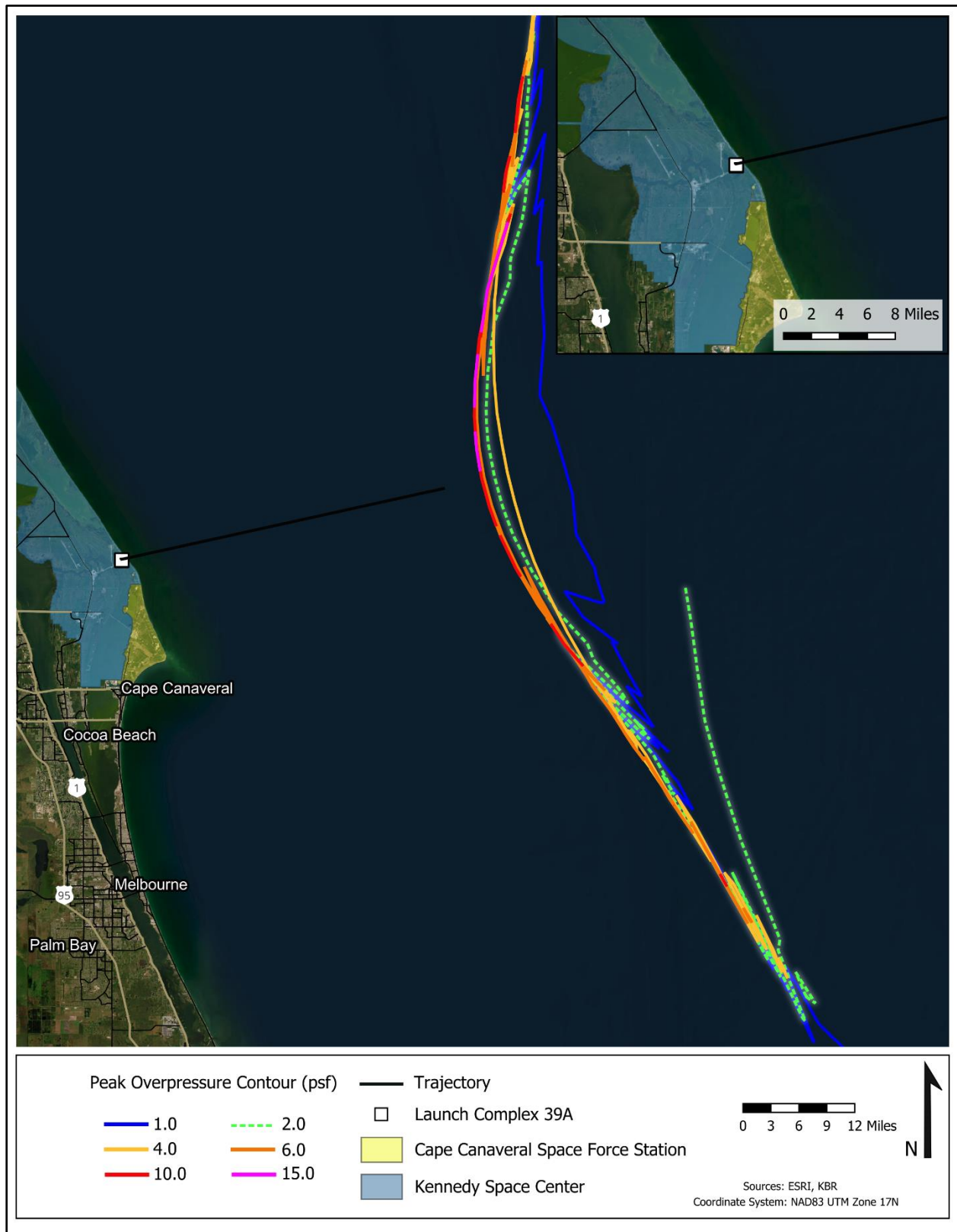


Figure 155. Sonic Boom from Starship Launch at LC-39A: psf Contours: Summer Night

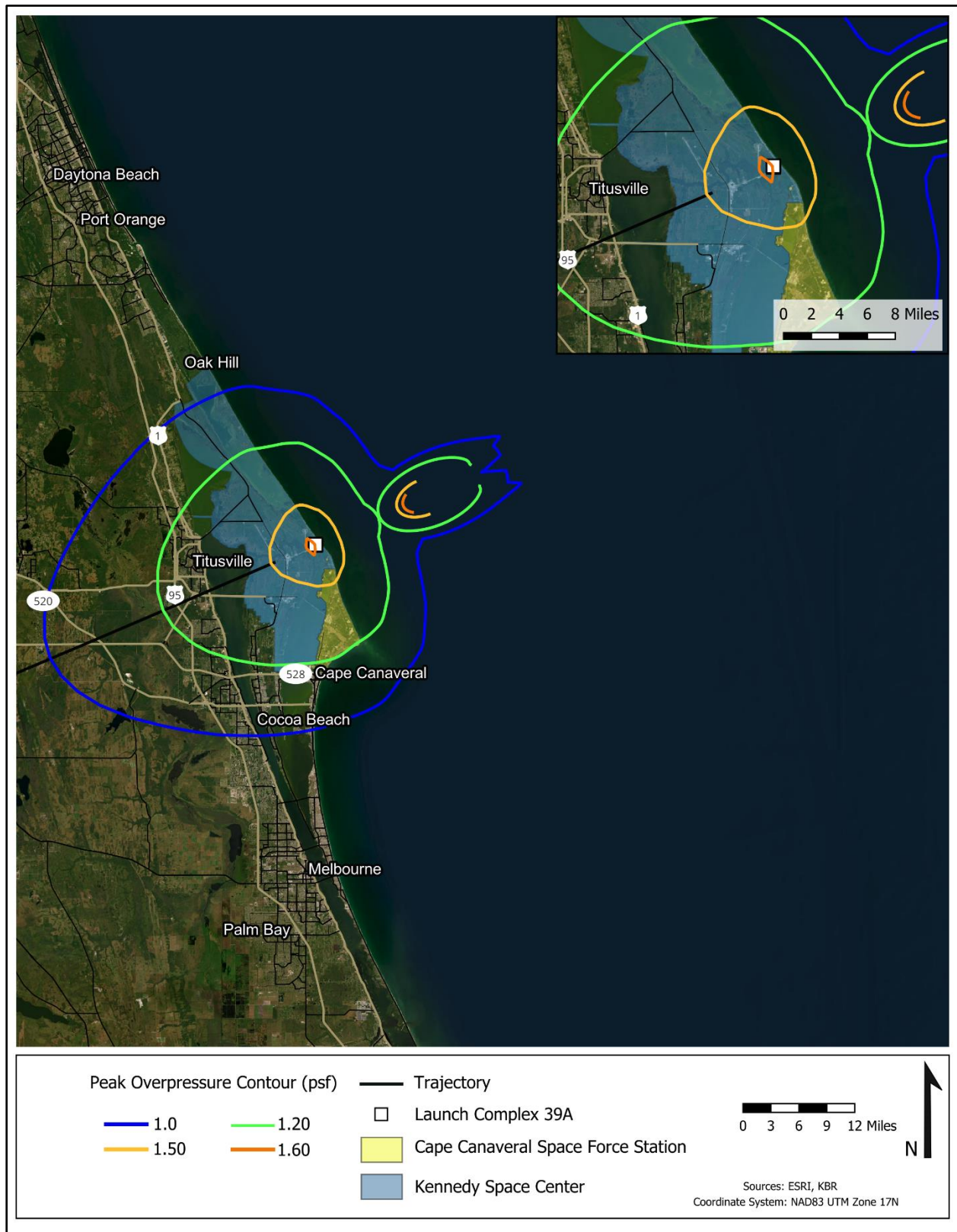


Figure 156. Sonic Boom from Starship Spacecraft Descent at LC-39A: psf Contours: Summer Night

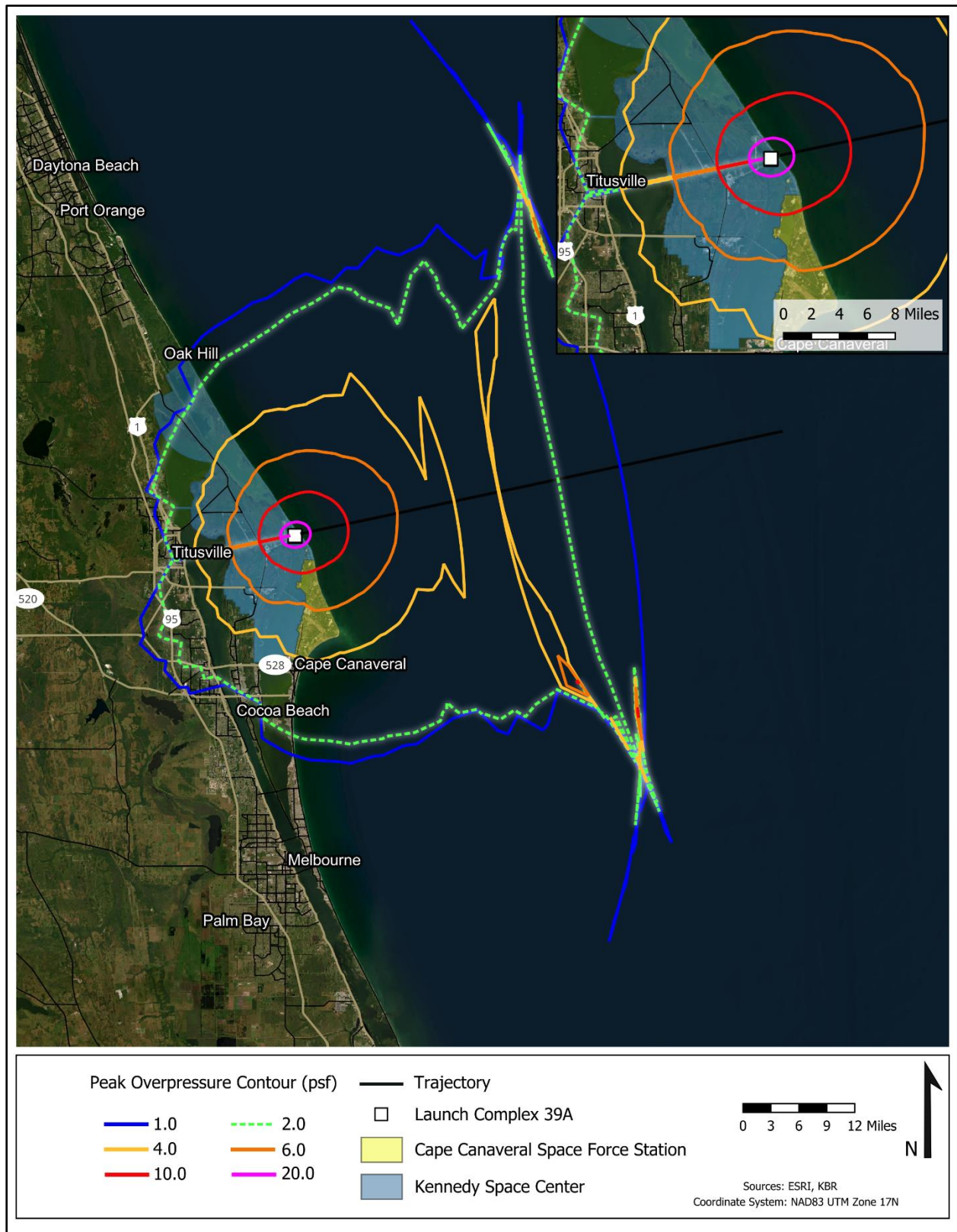


Figure 157. Sonic Boom from Super Heavy Descent (Nominal) at LC-39A: psf Contours: Summer Night

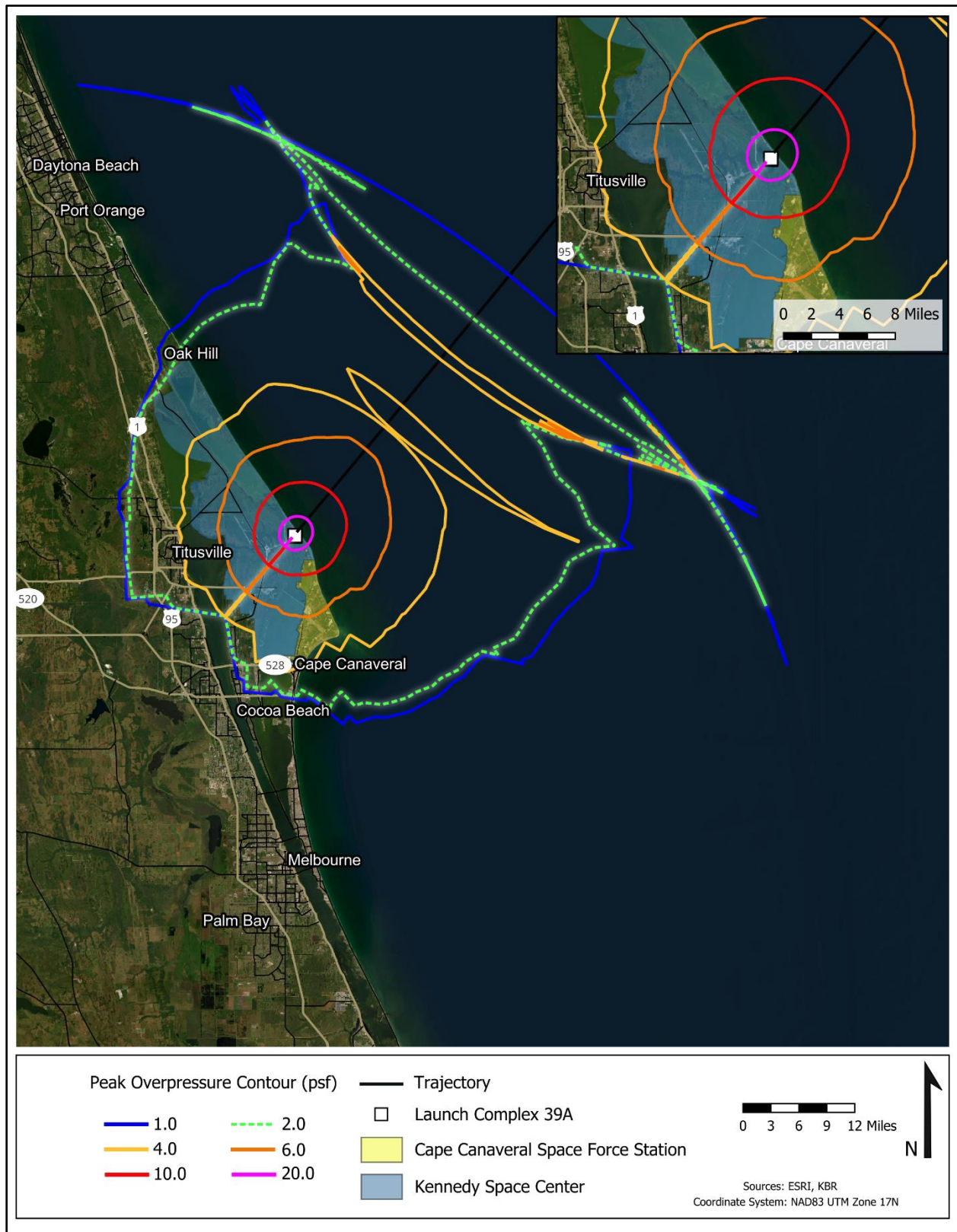


Figure 158. Sonic Boom from Super Heavy Descent (40-Deg) at LC-39A: psf Contours: Summer Night

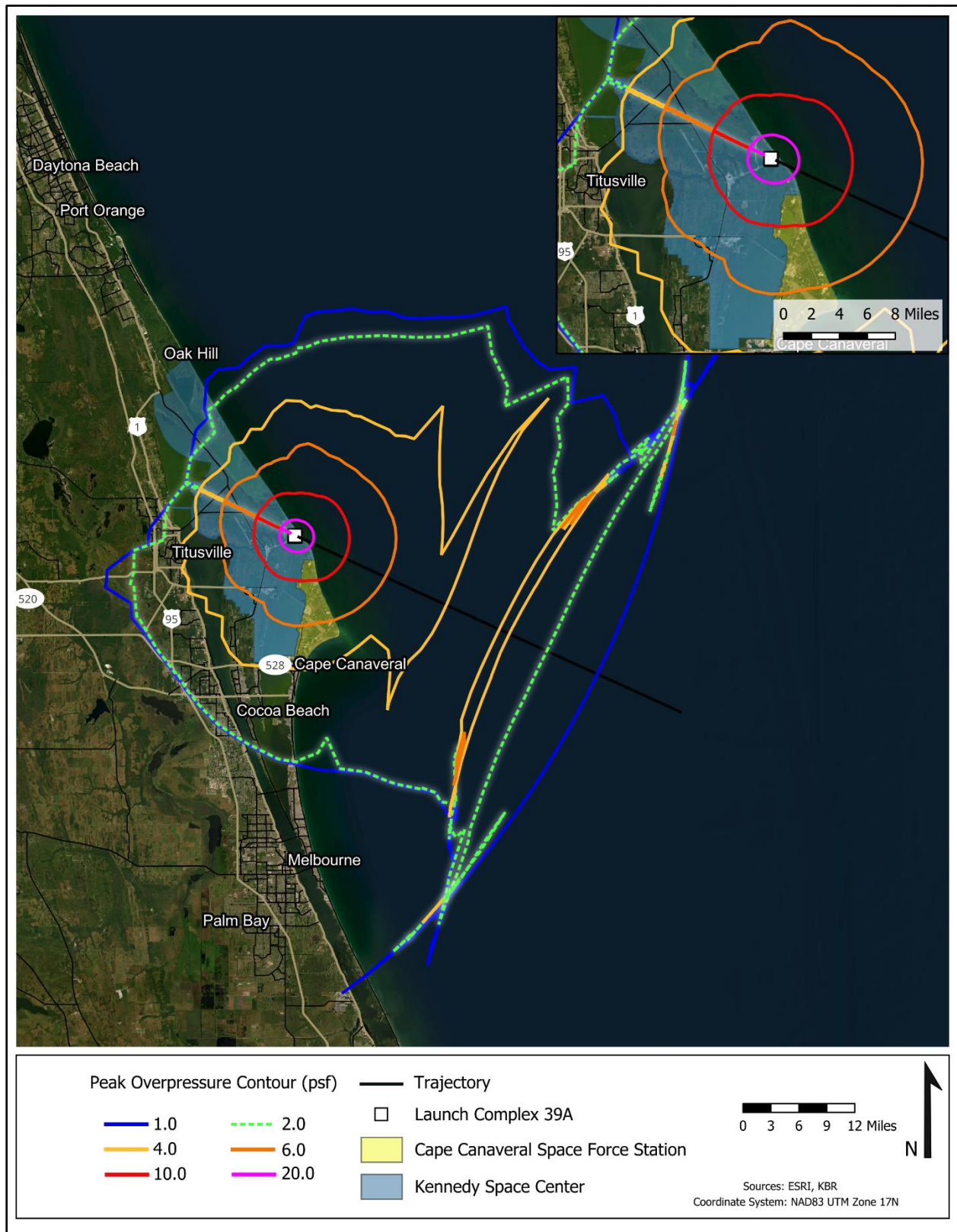


Figure 159. Sonic Boom from Super Heavy Descent (115-Deg) at LC-39A: psf Contours: Summer Night

3.2.4 Overpressure Contour Figures: Winter Day

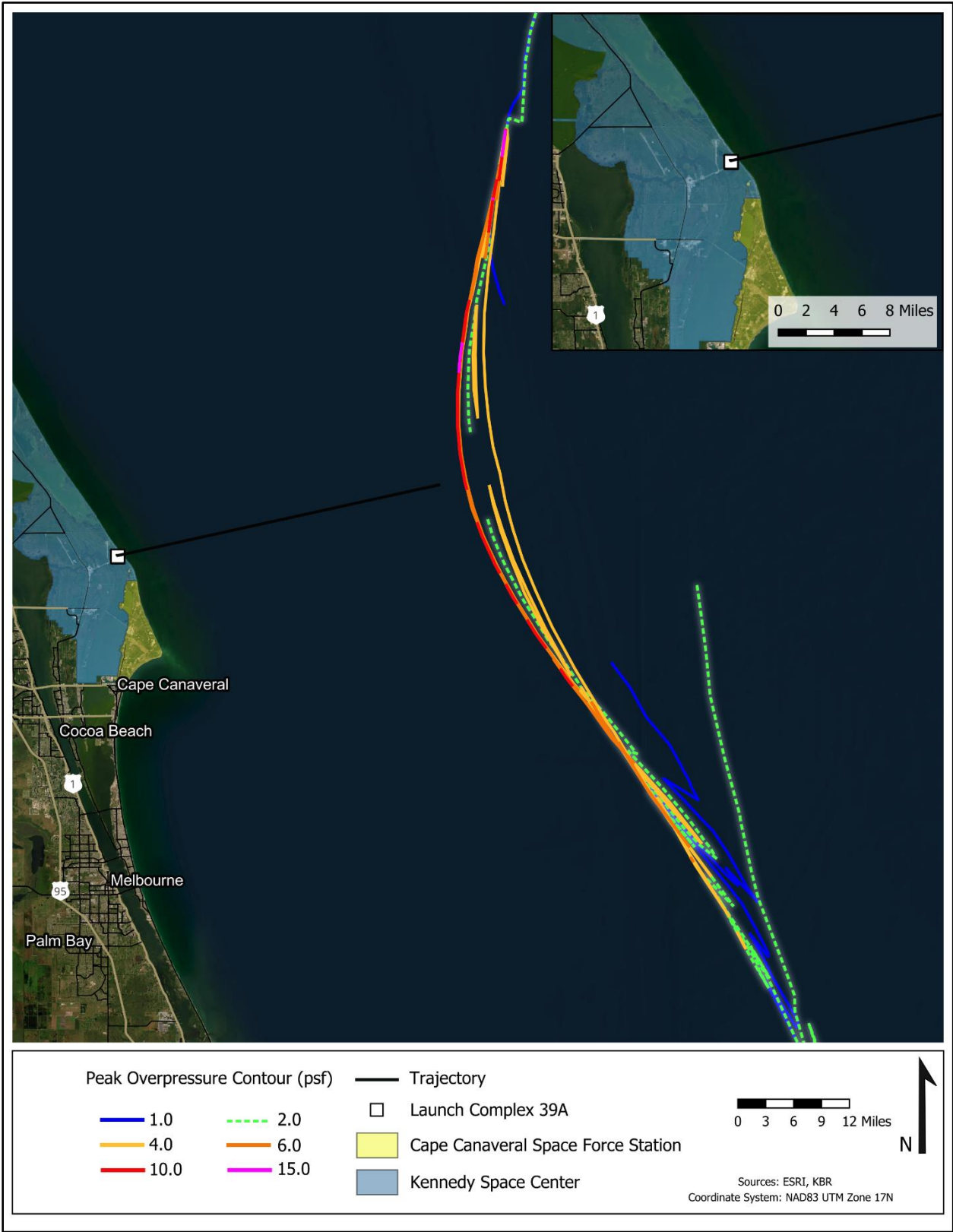


Figure 160. Sonic Boom from Starship Launch at LC-39A: psf Contours: Winter Day

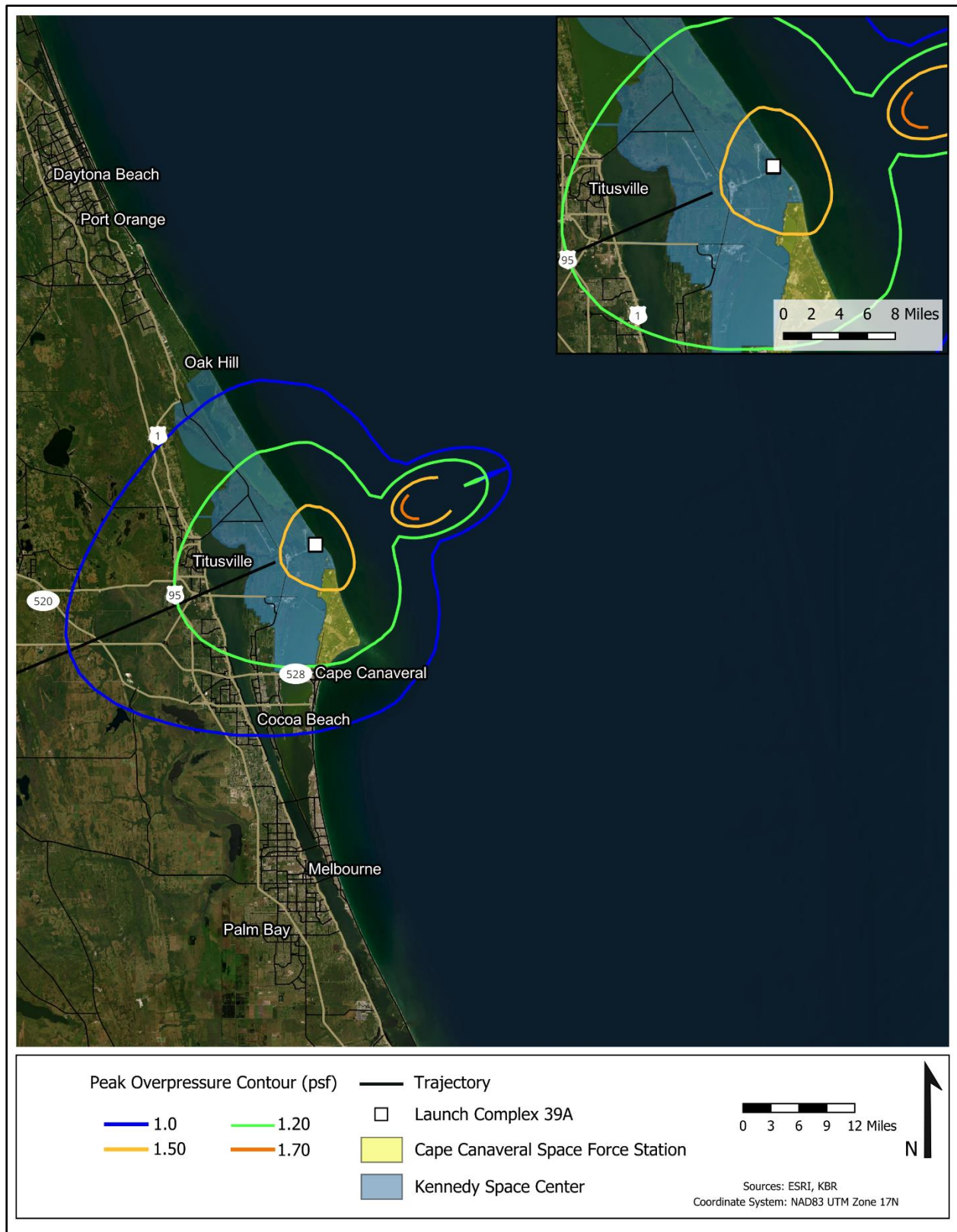


Figure 161. Sonic Boom from Starship Spacecraft Descent at LC-39A: psf Contours: Winter Day

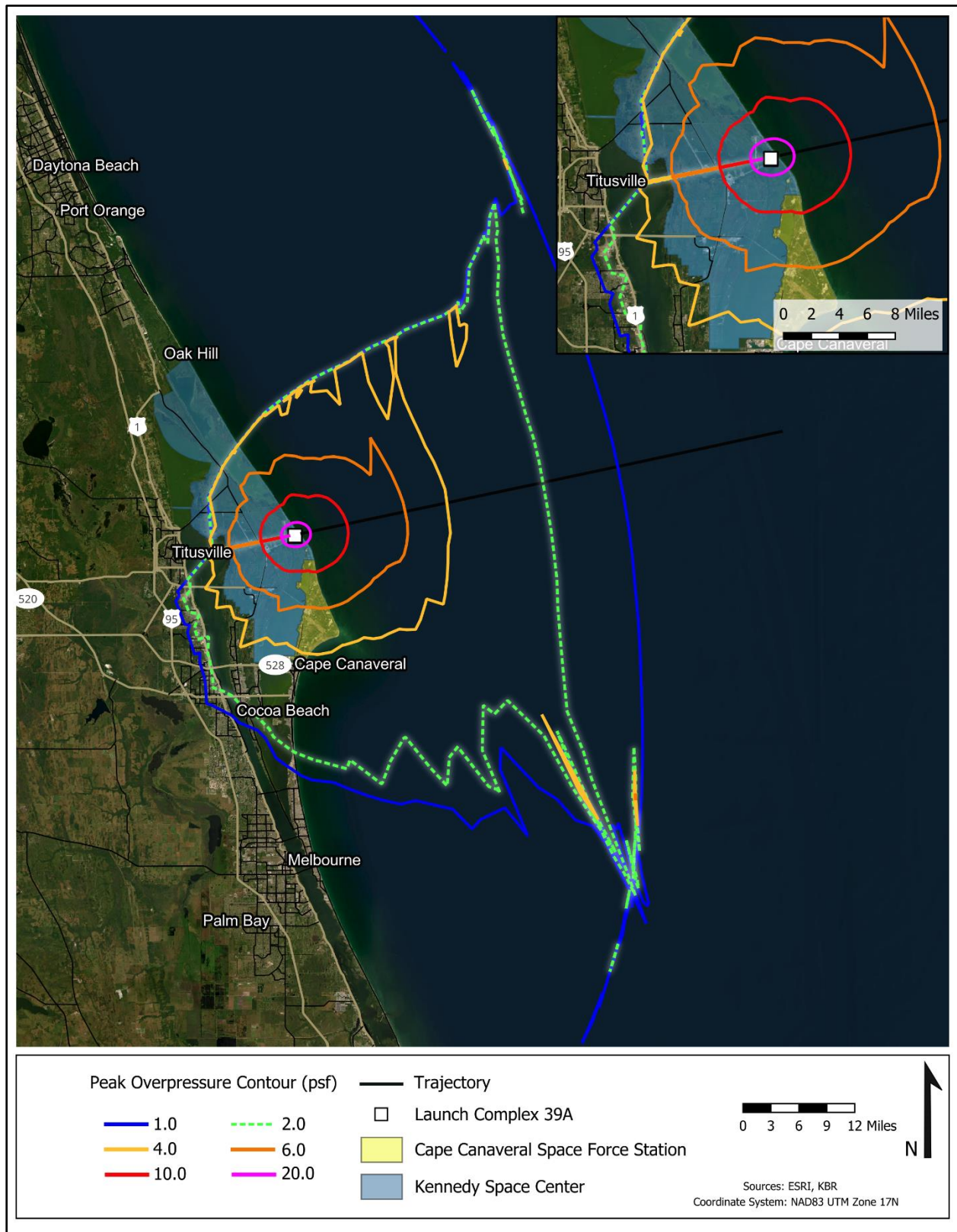


Figure 162. Sonic Boom from Super Heavy Descent (Nominal) at LC-39A: psf Contours: Winter Day

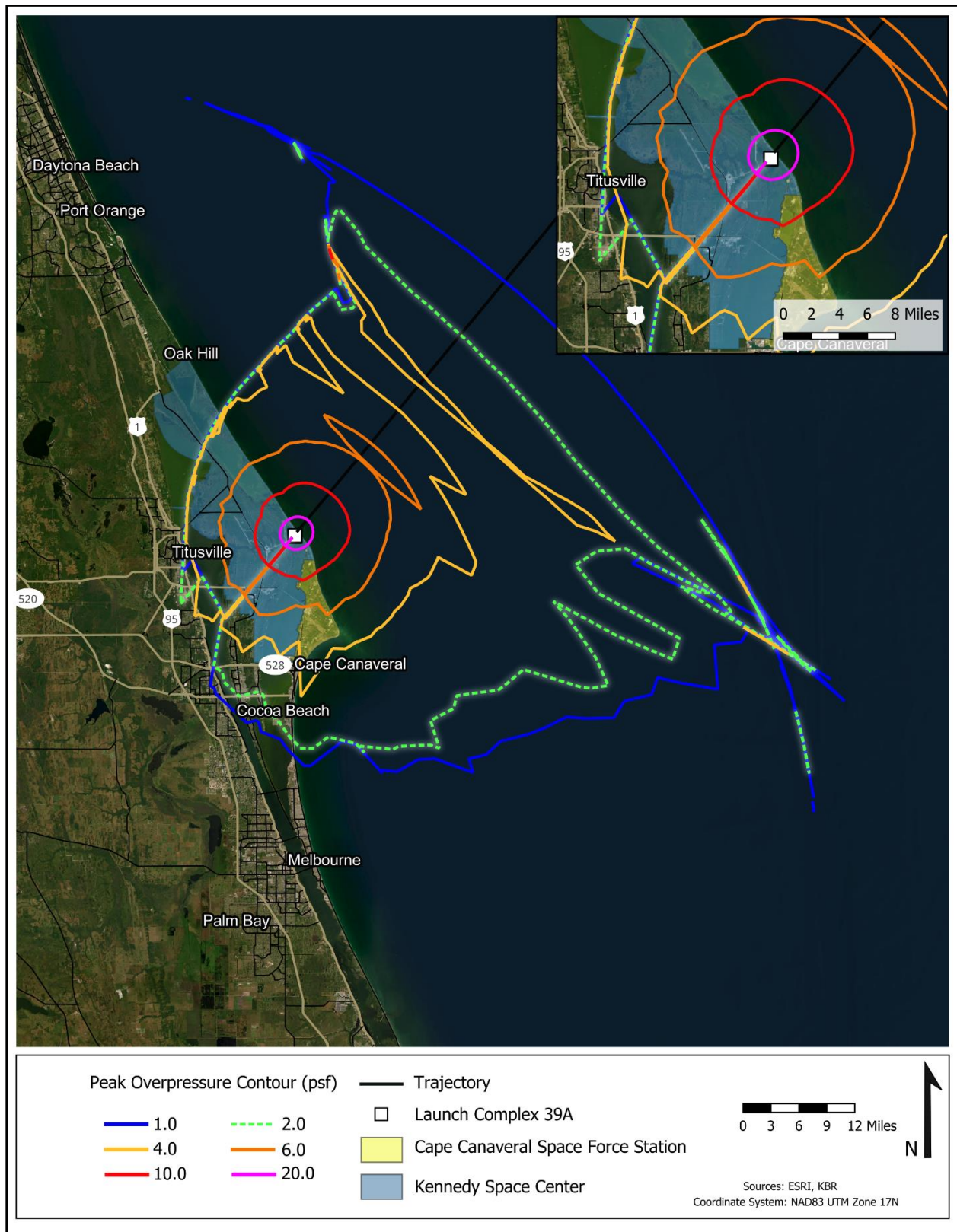


Figure 163. Sonic Boom from Super Heavy Descent (40-Deg) at LC-39A: psf Contours: Winter Day

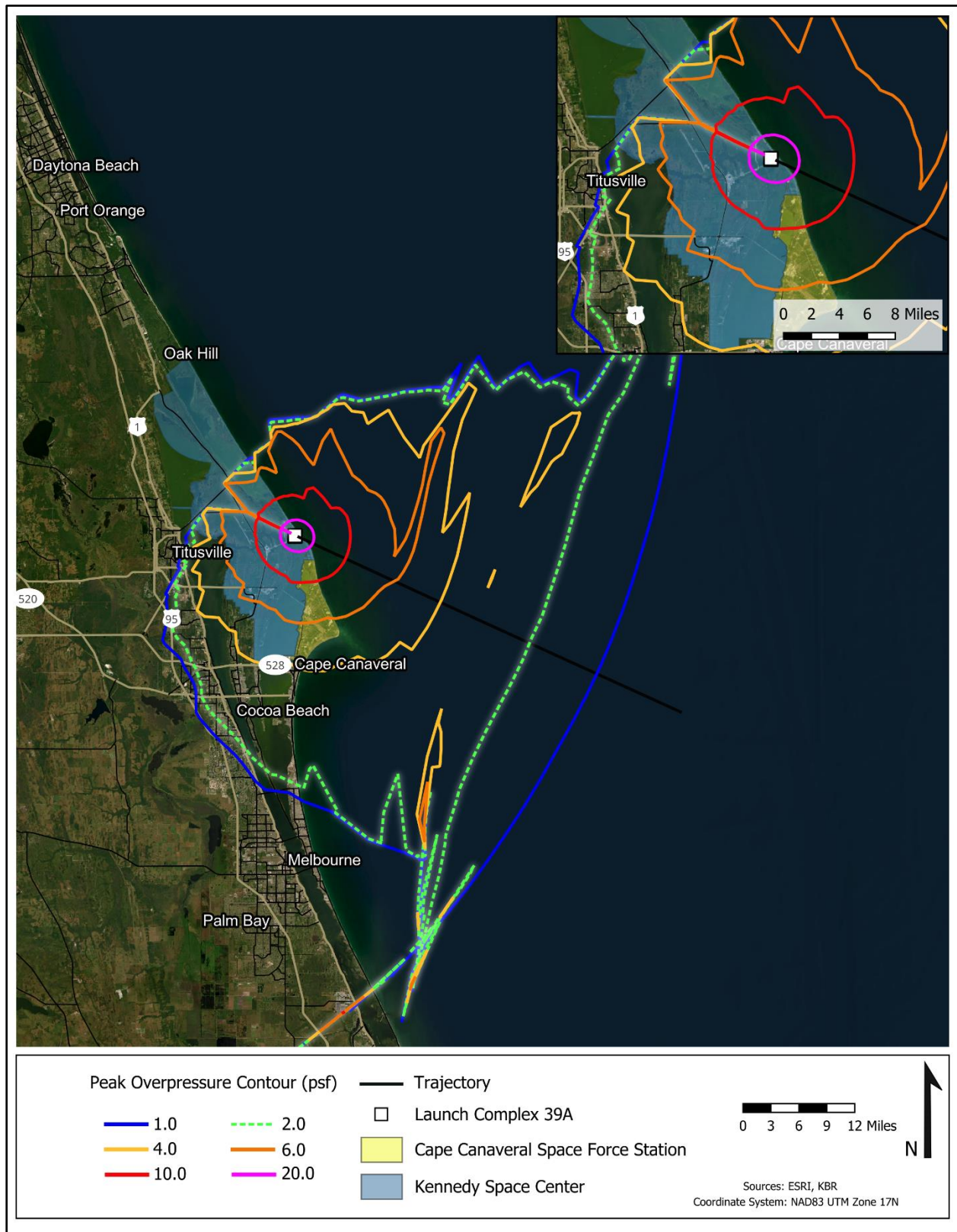


Figure 164. Sonic Boom from Super Heavy Descent (115-Deg) at LC-39A: psf Contours: Winter Day

3.2.5 Overpressure Contour Figures: Winter Night

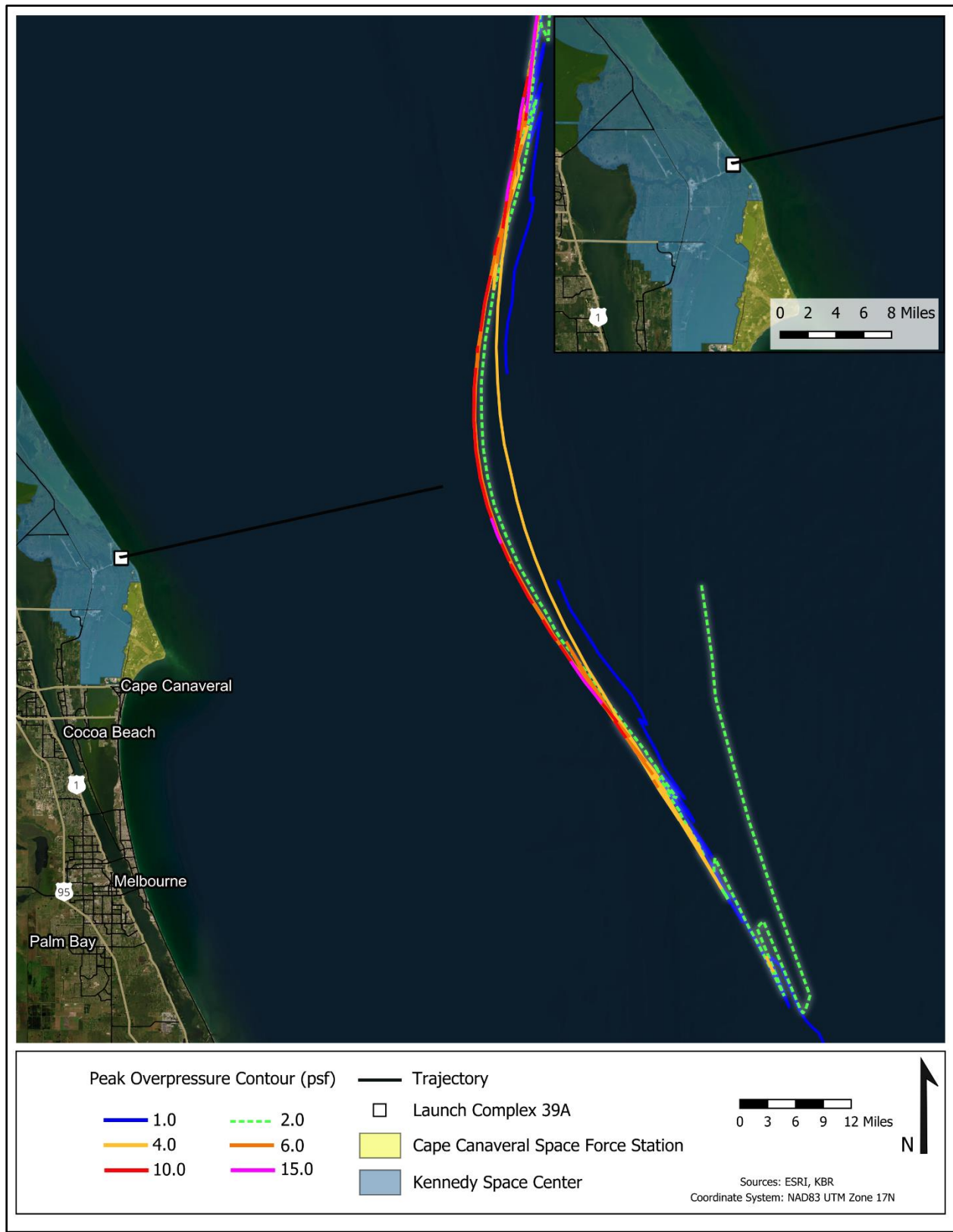


Figure 165. Sonic Boom from Starship Launch at LC-39A: psf Contours: Winter Night

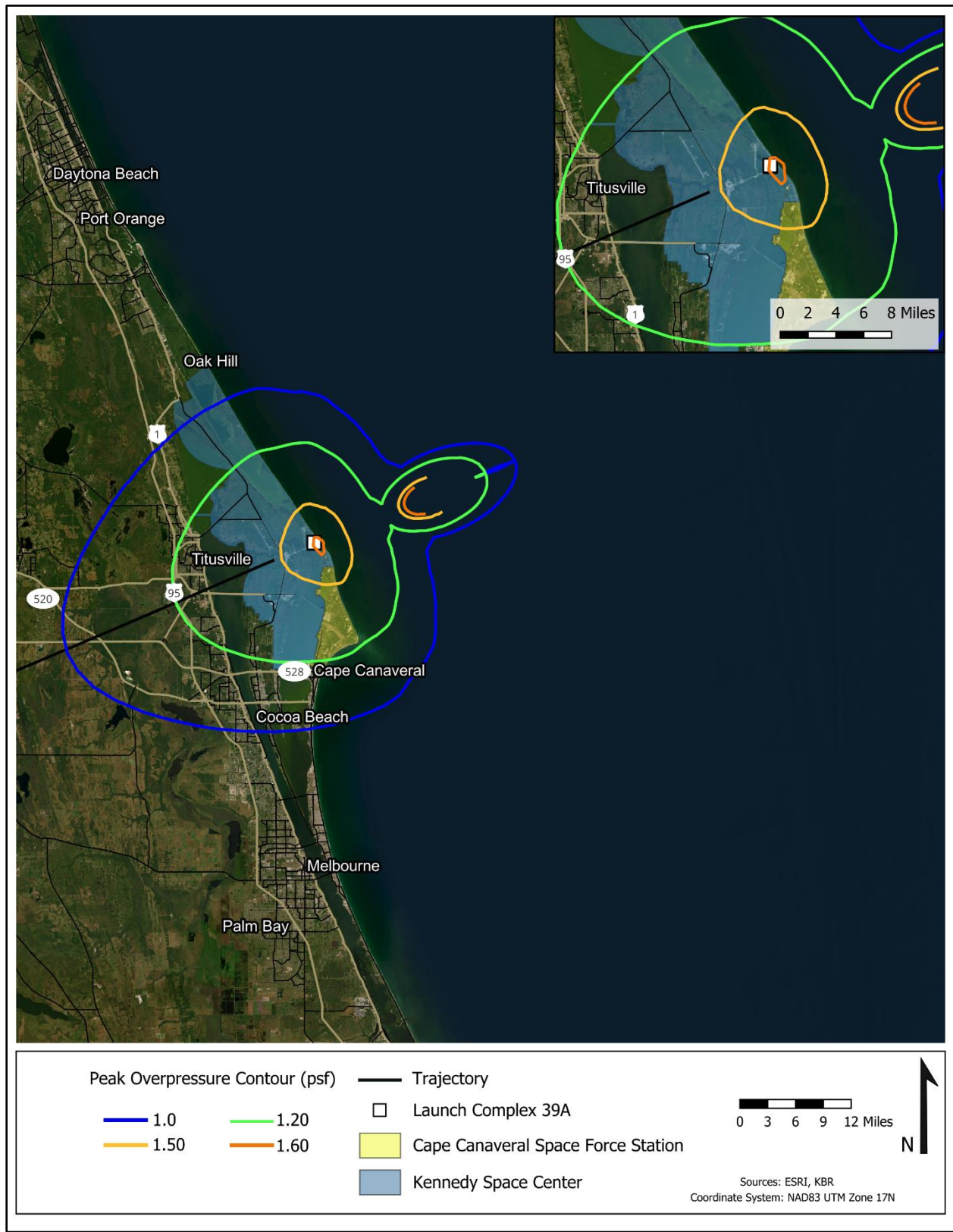


Figure 166. Sonic Boom from Starship Spacecraft Descent at LC-39A: psf Contours: Winter Night

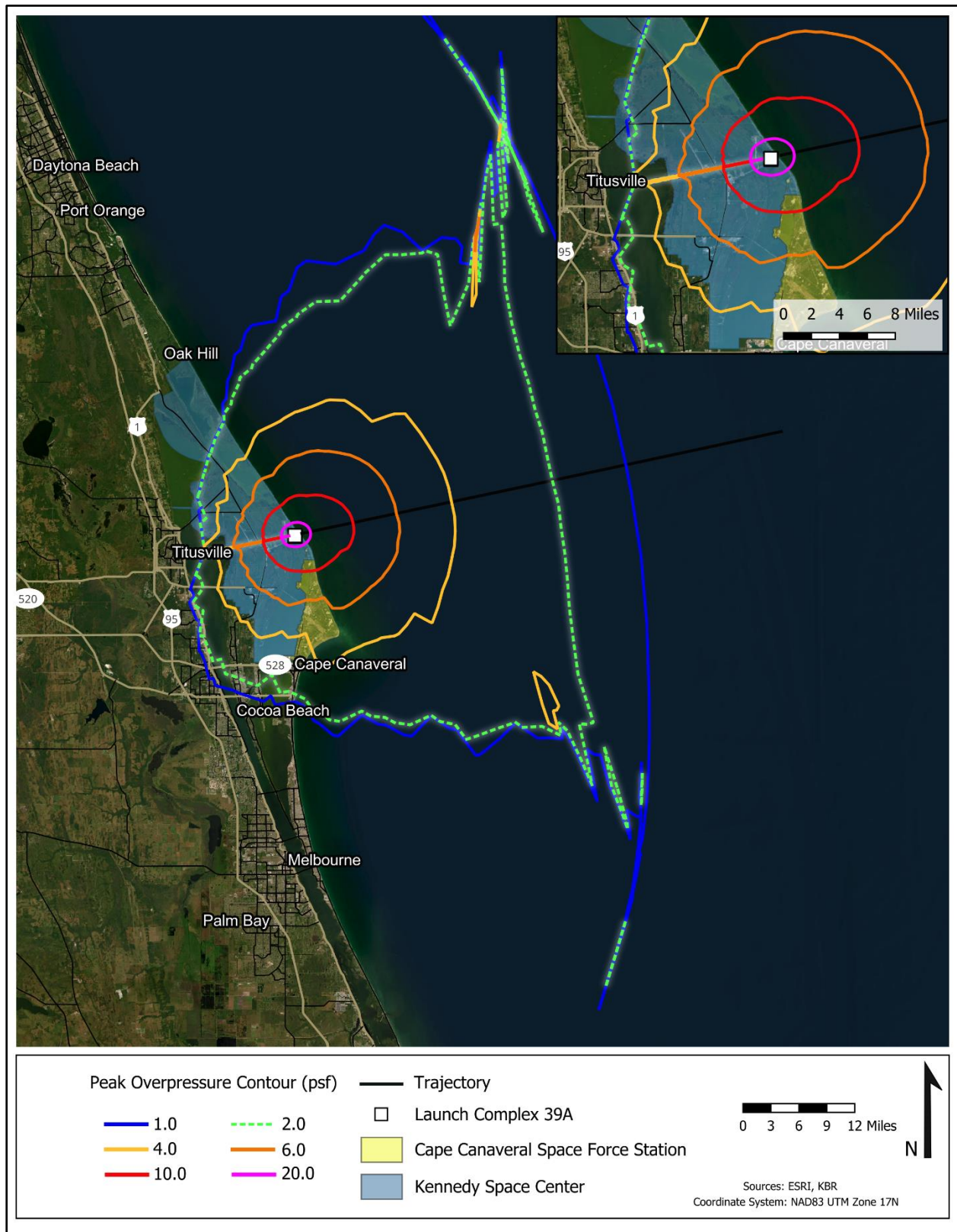


Figure 167. Sonic Boom from Super Heavy Descent (Nominal) at LC-39A: psf Contours: Winter Night

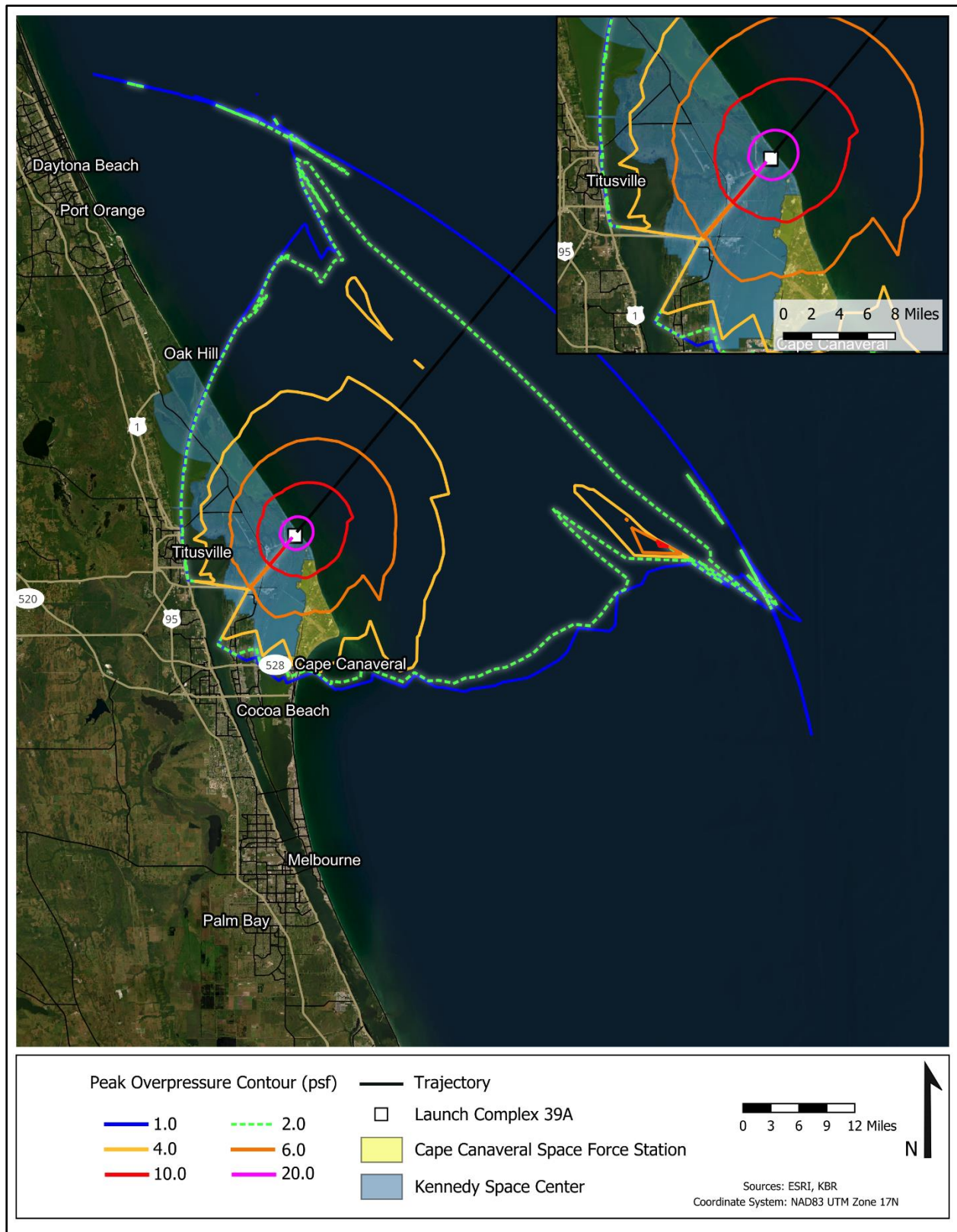


Figure 168. Sonic Boom from Super Heavy Descent (40-Degrees) at LC-39A: psf Contours: Winter Night

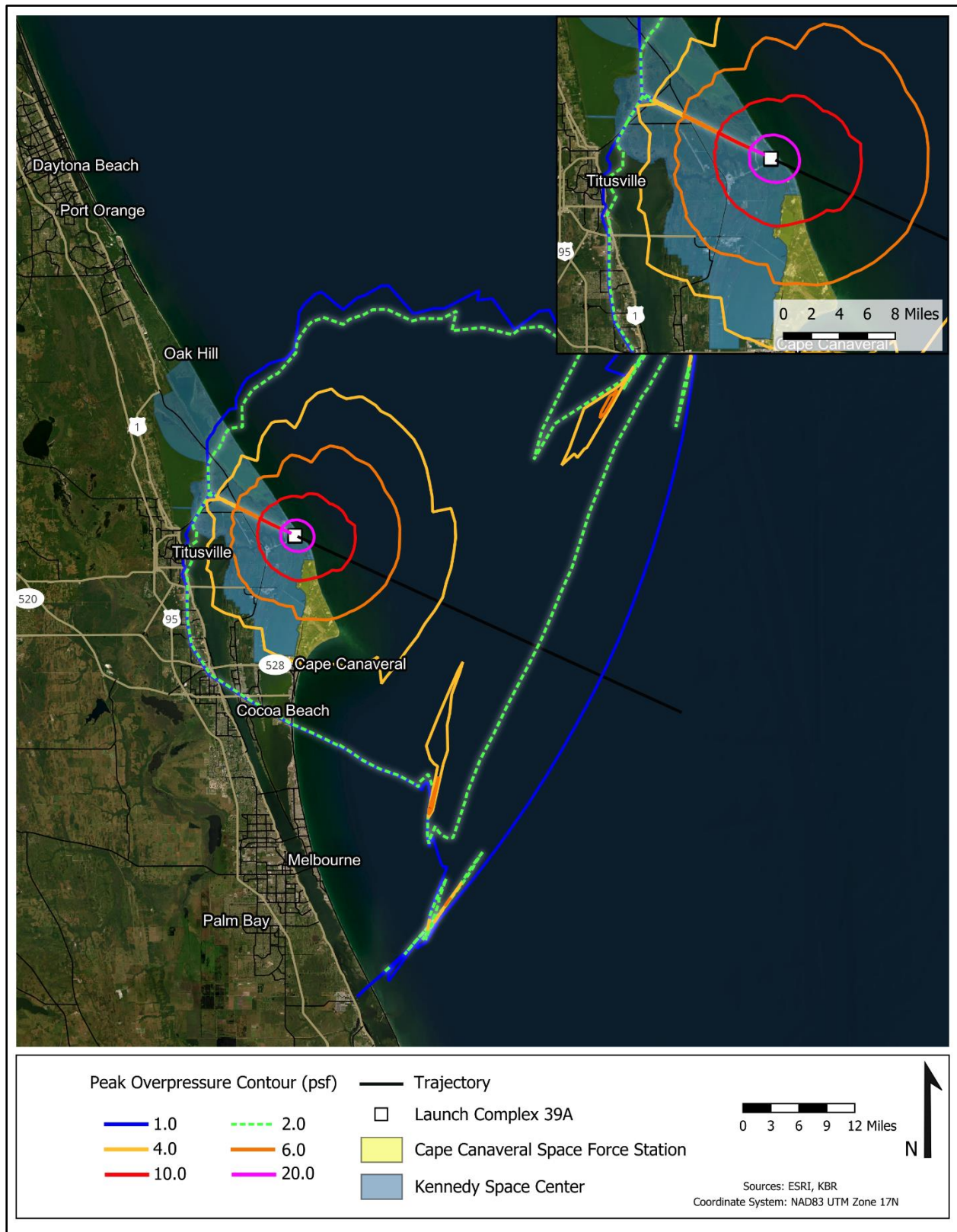


Figure 169. Sonic Boom from Super Heavy Descent (115-Degrees) at LC-39A: psf Contours: Winter Night

3.2.11 Single Event Sonic Boom Exposure Results at Points of Interest [Tables]

**Table 46. Sonic Boom Metrics at Points of Interest: Starship Descent: Nominal (80-Deg) Heading:
Annual Mean**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	1.37	130.4	88.2	104.9
SpaceX Operations Area	1.46	130.9	88.9	105.5
Titusville Beach	1.59	131.6	89.9	106.6
Playalinda Beach	1.46	130.9	88.9	105.6
Kennedy Space Center Visitor Complex	1.41	130.6	88.4	105.1
KSC Child Development Center	1.42	130.6	88.5	105.2
Merritt Island National Wildlife Refuge Visitor Center	1.35	130.2	87.8	104.5
Pine Island Conservation Area/Pine Island Estates	1.32	130.0	87.7	104.4
Kings Park Estates - Courtenay	1.27	129.7	87.4	104.1
Jetty Park Campground	1.18	129.0	86.1	102.8
Rockledge High School	1.05	128.1	84.7	101.3
Merritt Island	1.06	128.1	84.9	101.5
Oak Park Elementary School	1.17	129.0	86.1	102.8
Titusville High School	1.27	129.7	87.0	103.7
Summerwood Villas	1.27	129.7	87.0	103.7
Atlantis Elementary School	1.24	129.5	86.8	103.5
Fairglen Elementary School	1.21	129.2	86.4	103.1
Lewis Carroll Elementary School	1.15	128.8	85.9	102.6
Cocoa	1.13	128.6	85.6	102.2
Cocoa Beach	1.04	127.9	84.5	101.1
Pinegrove Estates	1.11	128.5	85.4	102.0
Fern Meadows	1.07	128.2	84.9	101.5
KSC Office Outside BDA	1.52	131.3	89.4	106.1
The Rock Church	1.00	127.6	84.0	100.6

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels.

**Table 47. Sonic Boom Metrics at Points of Interest: Starship Descent: Nominal (80-Deg) Heading:
Summer Day**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	1.35	130.2	87.9	104.6
SpaceX Operations Area	1.47	130.9	89.0	105.7
Titusville Beach	1.58	131.5	89.8	106.5
Playalinda Beach	1.49	131.1	89.2	105.8
Kennedy Space Center Visitor Complex	1.41	130.6	88.4	105.1
KSC Child Development Center	1.42	130.7	88.5	105.2
Merritt Island National Wildlife Refuge Visitor Center	1.38	130.4	88.2	104.9
Pine Island Conservation Area/Pine Island Estates	1.33	130.1	87.7	104.4
Kings Park Estates - Courtenay	1.28	129.7	87.1	103.8
Jetty Park Campground	1.16	128.9	86.0	102.6
Rockledge High School	1.05	128.0	84.7	101.3
Merritt Island	1.06	128.1	84.7	101.3
Oak Park Elementary School	1.20	129.2	86.5	103.2
Titusville High School	1.29	129.8	87.3	104.0
Summerwood Villas	1.29	129.8	87.3	104.0
Atlantis Elementary School	1.26	129.6	87.1	103.8
Fairglen Elementary School	1.21	129.3	86.6	103.3
Lewis Carroll Elementary School	1.15	128.8	85.8	102.5
Cocoa	1.13	128.6	85.6	102.2
Cocoa Beach	1.03	127.8	84.4	101.0
Pinegrove Estates	1.14	128.7	85.7	102.4
Fern Meadows	1.07	128.2	84.9	101.5
KSC Office Outside BDA	1.53	131.3	89.4	106.2
The Rock Church	1.02	127.8	84.5	101.0

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels.

Table 48. Sonic Boom Metrics at Points of Interest: Starship Descent: Nominal (80-Deg) Heading: Summer Night

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	1.35	130.2	87.9	104.6
SpaceX Operations Area	1.47	131.0	89.0	105.7
Titusville Beach	1.58	131.6	89.8	106.5
Playalinda Beach	1.50	131.1	89.1	105.8
Kennedy Space Center Visitor Complex	1.42	130.6	88.5	105.2
KSC Child Development Center	1.42	130.7	88.4	105.1
Merritt Island National Wildlife Refuge Visitor Center	1.39	130.4	88.1	104.7
Pine Island Conservation Area/Pine Island Estates	1.33	130.1	87.7	104.4
Kings Park Estates - Courtenay	1.28	129.7	87.2	103.9
Jetty Park Campground	1.16	128.9	85.9	102.5
Rockledge High School	1.05	128.0	84.6	101.2
Merritt Island	1.05	128.1	84.7	101.3
Oak Park Elementary School	1.21	129.2	86.4	103.1
Titusville High School	1.30	129.9	87.5	104.2
Summerwood Villas	1.30	129.8	87.3	104.0
Atlantis Elementary School	1.26	129.6	87.0	103.7
Fairglen Elementary School	1.21	129.3	86.4	103.1
Lewis Carroll Elementary School	1.15	128.8	85.8	102.5
Cocoa	1.13	128.6	85.6	102.2
Cocoa Beach	1.02	127.8	84.3	100.9
Pinegrove Estates	1.14	128.8	85.7	102.4
Fern Meadows	1.07	128.2	84.9	101.5
KSC Office Outside BDA	1.54	131.3	89.5	106.2
The Rock Church	1.03	127.8	84.3	100.9

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels.

**Table 49. Sonic Boom Metrics at Points of Interest: Starship Descent: Nominal (80-Deg) Heading:
Winter Day**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	1.38	130.4	88.3	105.0
SpaceX Operations Area	1.46	130.9	88.8	105.4
Titusville Beach	1.60	131.7	90.0	106.7
Playalinda Beach	1.47	130.9	88.9	105.6
Kennedy Space Center Visitor Complex	1.40	130.5	88.3	105.0
KSC Child Development Center	1.41	130.6	88.5	105.2
Merritt Island National Wildlife Refuge Visitor Center	1.34	130.2	87.8	104.5
Pine Island Conservation Area/Pine Island Estates	1.32	130.0	87.6	104.3
Kings Park Estates - Courtenay	1.27	129.7	87.0	103.7
Jetty Park Campground	1.17	129.0	86.1	102.8
Rockledge High School	1.05	128.0	84.7	101.3
Merritt Island	1.06	128.1	84.8	101.4
Oak Park Elementary School	1.16	128.9	86.0	102.7
Titusville High School	1.26	129.6	87.1	103.8
Summerwood Villas	1.26	129.6	87.0	103.7
Atlantis Elementary School	1.24	129.4	86.8	103.5
Fairglen Elementary School	1.20	129.2	86.4	103.1
Lewis Carroll Elementary School	1.15	128.8	85.8	102.5
Cocoa	1.12	128.6	85.5	102.2
Cocoa Beach	1.03	127.9	84.4	101.0
Pinegrove Estates	1.10	128.4	85.3	101.9
Fern Meadows	1.06	128.1	84.7	101.3
KSC Office Outside BDA	1.52	131.2	89.4	106.1
The Rock Church	1.00	127.6	83.9	100.4

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels.

Table 50. Sonic Boom Metrics at Points of Interest: Starship Descent: Nominal (80-Deg) Heading: Winter Night

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	1.37	130.3	88.0	104.6
SpaceX Operations Area	1.45	130.8	88.8	105.5
Titusville Beach	1.60	131.7	90.0	106.7
Playalinda Beach	1.47	130.9	88.9	105.6
Kennedy Space Center Visitor Complex	1.40	130.5	88.2	104.9
KSC Child Development Center	1.41	130.6	88.5	105.2
Merritt Island National Wildlife Refuge Visitor Center	1.34	130.2	87.9	104.6
Pine Island Conservation Area/Pine Island Estates	1.31	130.0	87.5	104.2
Kings Park Estates - Courtenay	1.27	129.6	87.1	103.8
Jetty Park Campground	1.16	128.9	85.9	102.6
Rockledge High School	1.04	128.0	84.6	101.2
Merritt Island	1.05	128.1	84.7	101.2
Oak Park Elementary School	1.17	128.9	86.0	102.7
Titusville High School	1.26	129.6	87.1	103.8
Summerwood Villas	1.26	129.6	87.1	103.8
Atlantis Elementary School	1.24	129.4	86.8	103.5
Fairglen Elementary School	1.20	129.2	86.4	103.1
Lewis Carroll Elementary School	1.14	128.8	85.7	102.4
Cocoa	1.12	128.6	85.5	102.1
Cocoa Beach	1.03	127.8	84.4	101.0
Pinegrove Estates	1.10	128.4	85.3	101.9
Fern Meadows	1.06	128.1	84.7	101.3
KSC Office Outside BDA	1.52	131.2	89.3	106.0
The Rock Church	0.99	127.5	83.8	100.4

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels.

**Table 51. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: Nominal (80-Degree) Heading:
Annual Mean**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	6.53	143.9	105.6	123.1
SpaceX Operations Area	6.35	143.6	104.2	122.3
Titusville Beach	20.51	153.8	115.8	134.4
Playalinda Beach	8.16	145.8	107.4	125.2
Kennedy Space Center Visitor Complex	4.74	141.1	102.4	119.8
KSC Child Development Center	6.09	143.3	104.8	122.3
Merritt Island National Wildlife Refuge Visitor Center	4.02	139.7	100.1	117.8
Pine Island Conservation Area/Pine Island Estates	3.81	139.2	100.2	117.6
Kings Park Estates - Courtenay	3.18	137.7	98.0	115.4
Jetty Park Campground	4.48	140.6	101.2	118.8
Rockledge High School				
Merritt Island	1.24	129.5	95.1	112.4
Oak Park Elementary School				
Titusville High School				
Summerwood Villas	1.80	132.7	92.2	109.4
Atlantis Elementary School	1.73	132.4	96.6	114.1
Fairglen Elementary School	2.58	135.8	96.3	113.8
Lewis Carroll Elementary School	1.99	133.6	94.8	112.1
Cocoa	1.46	130.9	94.8	112.2
Cocoa Beach	1.88	133.1	97.1	114.5
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	11.06	148.5	109.9	128.0
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

Table 52. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: Nominal (80-Degree) Heading: Summer Day

Point of Interest	Peak Overpressure (psf)	Lpeak (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	5.86	143.0	103.6	121.5
SpaceX Operations Area	7.17	144.7	106.3	124.0
Titusville Beach	20.87	154.0	115.5	134.4
Playalinda Beach	9.02	146.7	108.5	126.3
Kennedy Space Center Visitor Complex	6.13	143.3	104.9	122.4
KSC Child Development Center	6.37	143.7	105.1	122.7
Merritt Island National Wildlife Refuge Visitor Center	5.31	142.1	103.5	121.1
Pine Island Conservation Area/Pine Island Estates	4.62	140.9	102.6	120.1
Kings Park Estates - Courtenay	4.19	140.0	101.6	119.1
Jetty Park Campground	4.24	140.1	100.3	118.1
Rockledge High School				
Merritt Island				
Oak Park Elementary School				
Titusville High School				
Summerwood Villas				
Atlantis Elementary School				
Fairglen Elementary School	1.46	130.9	96.7	114.2
Lewis Carroll Elementary School				
Cocoa				
Cocoa Beach	0.54	122.4	91.8	109.1
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	11.66	148.9	109.3	128.0
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

Table 53. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: Nominal (80-Degree) Heading: Summer Night

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	5.97	143.1	104.5	122.0
SpaceX Operations Area	6.95	144.4	105.5	123.4
Titusville Beach	20.92	154.0	115.9	134.6
Playalinda Beach	8.88	146.6	108.0	125.9
Kennedy Space Center Visitor Complex	5.84	142.9	104.1	121.8
KSC Child Development Center	6.18	143.4	104.7	122.3
Merritt Island National Wildlife Refuge Visitor Center	4.95	141.5	101.9	119.7
Pine Island Conservation Area/Pine Island Estates	4.56	140.8	101.9	119.4
Kings Park Estates - Courtenay	4.09	139.8	101.1	118.6
Jetty Park Campground	3.81	139.2	99.5	117.1
Rockledge High School				
Merritt Island	2.70	136.2	96.3	113.7
Oak Park Elementary School				
Titusville High School	3.14	137.5	98.2	115.6
Summerwood Villas	2.92	136.9	97.7	115.0
Atlantis Elementary School	3.07	137.3	99.1	116.6
Fairglen Elementary School	3.04	137.3	97.9	115.4
Lewis Carroll Elementary School	2.72	136.3	96.5	113.9
Cocoa	1.84	132.9	93.5	110.8
Cocoa Beach	2.55	135.7	96.7	114.2
Pinegrove Estates	1.28	129.8	90.6	107.5
Fern Meadows	0.59	123.1	89.2	106.4
KSC Office Outside BDA	11.42	148.8	109.5	127.9
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 54. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: Nominal (80-Degree) Heading:
Winter Day**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	5.93	143.1	104.3	121.9
SpaceX Operations Area	7.19	144.7	106.0	123.8
Titusville Beach	20.88	154.0	115.1	134.2
Playalinda Beach	8.61	146.3	108.1	125.8
Kennedy Space Center Visitor Complex	5.73	142.8	104.1	121.8
KSC Child Development Center	5.67	142.7	103.8	121.4
Merritt Island National Wildlife Refuge Visitor Center	4.83	141.3	101.8	119.6
Pine Island Conservation Area/Pine Island Estates	3.93	139.5	100.6	118.0
Kings Park Estates - Courtenay	3.48	138.4	99.2	116.5
Jetty Park Campground	3.75	139.1	99.4	117.0
Rockledge High School	1.28	129.8	92.8	110.1
Merritt Island	2.28	134.8	95.7	113.0
Oak Park Elementary School				
Titusville High School				
Summerwood Villas				
Atlantis Elementary School	1.64	131.9	94.8	112.3
Fairglen Elementary School	1.69	132.2	96.0	113.5
Lewis Carroll Elementary School	2.91	136.9	97.2	114.6
Cocoa	2.55	135.7	97.0	114.5
Cocoa Beach	2.87	136.8	96.7	114.2
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	11.04	148.5	108.9	127.4
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 55. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: Nominal (80-Degree) Heading:
Winter Night**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	5.43	142.3	103.1	121.0
SpaceX Operations Area	6.82	144.3	105.8	123.5
Titusville Beach	20.88	154.0	115.8	134.5
Playalinda Beach	8.27	145.9	107.1	125.1
Kennedy Space Center Visitor Complex	5.54	142.5	104.1	121.6
KSC Child Development Center	5.66	142.7	103.9	121.5
Merritt Island National Wildlife Refuge Visitor Center	4.18	140.0	100.3	118.2
Pine Island Conservation Area/Pine Island Estates	3.96	139.6	100.4	118.1
Kings Park Estates - Courtenay	3.57	138.7	99.4	116.9
Jetty Park Campground	3.34	138.1	98.6	115.9
Rockledge High School				
Merritt Island	0.72	124.9	90.6	107.9
Oak Park Elementary School				
Titusville High School				
Summerwood Villas				
Atlantis Elementary School				
Fairglen Elementary School	1.67	132.1	94.3	111.8
Lewis Carroll Elementary School	2.20	134.5	96.1	113.7
Cocoa	1.22	129.4	93.8	111.3
Cocoa Beach	0.18	113.3	84.7	102.0
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	10.81	148.3	109.6	127.7
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 56. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (40-Degree) Heading:
Annual Mean**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	6.95	144.4	106.3	123.9
SpaceX Operations Area	7.88	145.5	106.5	124.7
Titusville Beach	21.66	154.3	116.3	135.0
Playalinda Beach	10.09	147.7	109.2	127.2
Kennedy Space Center Visitor Complex	5.32	142.1	102.7	120.5
KSC Child Development Center	5.67	142.7	104.6	121.9
Merritt Island National Wildlife Refuge Visitor Center	5.26	142.0	102.9	120.7
Pine Island Conservation Area/Pine Island Estates				
Kings Park Estates - Courtenay				
Jetty Park Campground	2.79	136.5	98.5	116.3
Rockledge High School				
Merritt Island				
Oak Park Elementary School				
Titusville High School	2.66	136.1	96.0	113.3
Summerwood Villas				
Atlantis Elementary School				
Fairglen Elementary School				
Lewis Carroll Elementary School				
Cocoa				
Cocoa Beach				
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	12.48	149.5	111.2	129.3
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 57. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (40-Degree) Heading:
Summer Day**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	6.55	143.9	104.5	122.5
SpaceX Operations Area	8.26	145.9	107.0	125.1
Titusville Beach	22.77	154.7	116.7	135.5
Playalinda Beach	10.83	148.3	110.0	127.9
Kennedy Space Center Visitor Complex	6.93	144.4	105.6	123.5
KSC Child Development Center	7.03	144.5	106.1	123.8
Merritt Island National Wildlife Refuge Visitor Center	6.46	143.8	104.9	122.7
Pine Island Conservation Area/Pine Island Estates	5.64	142.6	104.0	121.7
Kings Park Estates - Courtenay	4.22	140.1	101.8	119.4
Jetty Park Campground	4.17	140.0	101.4	118.9
Rockledge High School				
Merritt Island				
Oak Park Elementary School				
Titusville High School	5.07	141.7	102.2	120.0
Summerwood Villas				
Atlantis Elementary School				
Fairglen Elementary School				
Lewis Carroll Elementary School				
Cocoa				
Cocoa Beach				
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	12.84	149.8	111.7	129.6
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 58. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (40-Degree) Heading:
Summer Night**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	6.54	143.9	105.2	122.9
SpaceX Operations Area	7.69	145.3	106.6	124.5
Titusville Beach	22.86	154.8	116.5	135.5
Playalinda Beach	10.70	148.2	109.6	127.7
Kennedy Space Center Visitor Complex	6.25	143.5	104.6	122.5
KSC Child Development Center	6.50	143.9	104.3	122.5
Merritt Island National Wildlife Refuge Visitor Center	6.05	143.2	104.3	122.1
Pine Island Conservation Area/Pine Island Estates	4.62	140.9	97.5	115.4
Kings Park Estates - Courtenay	3.71	139.0	100.1	117.8
Jetty Park Campground	3.87	139.4	100.6	118.1
Rockledge High School				
Merritt Island				
Oak Park Elementary School	2.92	136.9	97.8	115.1
Titusville High School	4.12	139.9	101.3	118.8
Summerwood Villas	3.85	139.3	101.1	118.6
Atlantis Elementary School				
Fairglen Elementary School				
Lewis Carroll Elementary School	1.40	130.6	96.2	113.8
Cocoa				
Cocoa Beach				
Pinegrove Estates	2.92	136.9	97.4	114.9
Fern Meadows				
KSC Office Outside BDA	13.05	149.9	110.6	129.2
The Rock Church	2.42	135.3	95.2	112.4

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 59. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (40-Degree) Heading:
Winter Day**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	5.84	142.9	104.1	121.8
SpaceX Operations Area	7.89	145.5	107.0	124.8
Titusville Beach	22.80	154.8	116.7	135.5
Playalinda Beach	10.33	147.9	109.3	127.4
Kennedy Space Center Visitor Complex	6.40	143.7	104.6	122.5
KSC Child Development Center	6.82	144.3	104.4	122.7
Merritt Island National Wildlife Refuge Visitor Center	5.83	142.9	103.0	121.2
Pine Island Conservation Area/Pine Island Estates	5.05	141.7	94.9	112.6
Kings Park Estates - Courtenay	4.39	140.5	101.5	119.4
Jetty Park Campground	4.02	139.7	100.6	118.0
Rockledge High School	0.84	126.2	91.1	108.5
Merritt Island	1.64	132.0	97.4	114.7
Oak Park Elementary School				
Titusville High School				
Summerwood Villas				
Atlantis Elementary School	2.52	135.6	99.6	117.2
Fairglen Elementary School				
Lewis Carroll Elementary School	2.85	136.7	97.0	114.5
Cocoa	1.57	131.6	97.0	114.9
Cocoa Beach	2.79	136.5	98.2	115.6
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	12.49	149.5	111.3	129.3
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 60. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (40-Degree) Heading:
Winter Night**

Point of Interest	Peak Overpressure (psf)	Lpeak (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	6.32	143.6	104.5	122.4
SpaceX Operations Area	7.52	145.1	98.3	116.3
Titusville Beach	22.87	154.8	116.5	135.5
Playalinda Beach	10.12	147.7	109.3	127.3
Kennedy Space Center Visitor Complex	5.81	142.9	103.9	121.6
KSC Child Development Center	6.29	143.6	105.2	122.7
Merritt Island National Wildlife Refuge Visitor Center	5.28	142.1	103.4	120.9
Pine Island Conservation Area/Pine Island Estates				
Kings Park Estates - Courtenay	4.48	140.6	101.8	119.3
Jetty Park Campground	3.40	138.2	100.3	117.7
Rockledge High School				
Merritt Island				
Oak Park Elementary School				
Titusville High School				
Summerwood Villas				
Atlantis Elementary School				
Fairglen Elementary School				
Lewis Carroll Elementary School				
Cocoa				
Cocoa Beach				
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	12.45	149.5	110.7	129.0
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 61. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (115-Degree) Heading:
Annual Mean**

Point of Interest	Peak Overpressure (psf)	Lpeak (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	7.38	145.0	106.3	124.1
SpaceX Operations Area	7.88	145.5	106.9	124.8
Titusville Beach	24.41	155.4	117.2	136.2
Playalinda Beach	8.21	145.9	107.7	125.4
Kennedy Space Center Visitor Complex	5.87	143.0	104.0	121.9
KSC Child Development Center	6.13	143.3	103.6	121.7
Merritt Island National Wildlife Refuge Visitor Center	4.28	140.2	103.1	120.7
Pine Island Conservation Area/Pine Island Estates	4.20	140.1	100.6	118.3
Kings Park Estates - Courtenay	4.80	141.2	102.6	120.1
Jetty Park Campground	3.84	139.3	100.0	117.4
Rockledge High School	2.79	136.5	96.6	114.0
Merritt Island	2.89	136.8	97.1	114.7
Oak Park Elementary School				
Titusville High School	1.97	133.5	97.5	114.9
Summerwood Villas	2.19	134.4	95.4	112.6
Atlantis Elementary School	1.66	132.0	93.9	111.2
Fairglen Elementary School	3.31	138.0	98.6	116.2
Lewis Carroll Elementary School	3.67	138.9	99.2	116.9
Cocoa	3.25	137.8	98.5	116.0
Cocoa Beach	2.82	136.6	96.6	114.0
Pinegrove Estates				
Fern Meadows	1.41	130.6	93.5	110.9
KSC Office Outside BDA	12.24	149.4	111.3	129.2
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 62. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (115-Degree) Heading:
Summer Day**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	7.28	144.8	106.6	124.2
SpaceX Operations Area	8.39	146.1	107.8	125.5
Titusville Beach	25.08	155.6	117.5	136.6
Playalinda Beach	10.27	147.8	108.9	127.1
Kennedy Space Center Visitor Complex	6.33	143.6	105.4	122.9
KSC Child Development Center	6.54	143.9	105.2	123.0
Merritt Island National Wildlife Refuge Visitor Center	6.83	144.3	106.0	123.7
Pine Island Conservation Area/Pine Island Estates	4.86	141.3	102.8	120.3
Kings Park Estates - Courtenay	4.99	141.6	102.2	120.0
Jetty Park Campground	4.18	140.0	100.6	118.2
Rockledge High School	0.00	67.3	-17.2	-0.4
Merritt Island	3.36	138.1	98.6	116.0
Oak Park Elementary School				
Titusville High School				
Summerwood Villas				
Atlantis Elementary School				
Fairglen Elementary School	4.29	140.3	100.5	118.3
Lewis Carroll Elementary School	4.23	140.1	101.3	118.6
Cocoa				
Cocoa Beach	3.24	137.8	97.8	115.4
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	13.10	149.9	111.3	129.6
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 63. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (115-Degree) Heading:
Summer Night**

Point of Interest	Peak Overpressure (psf)	Lpeak (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	7.20	144.7	106.1	123.9
SpaceX Operations Area	8.28	146.0	107.1	125.1
Titusville Beach	25.10	155.6	117.4	136.5
Playalinda Beach	10.02	147.6	109.1	127.1
Kennedy Space Center Visitor Complex	6.30	143.6	105.3	122.8
KSC Child Development Center	6.62	144.0	105.2	123.0
Merritt Island National Wildlife Refuge Visitor Center	5.89	143.0	104.4	122.2
Pine Island Conservation Area/Pine Island Estates	4.64	140.9	102.3	119.8
Kings Park Estates - Courtenay	4.53	140.7	101.6	119.1
Jetty Park Campground	4.16	140.0	100.6	118.2
Rockledge High School	2.83	136.6	97.0	114.3
Merritt Island	3.09	137.4	98.2	115.4
Oak Park Elementary School				
Titusville High School	3.93	139.5	101.4	118.9
Summerwood Villas	3.83	139.3	100.1	117.7
Atlantis Elementary School	3.27	137.9	98.0	115.7
Fairglen Elementary School	3.54	138.6	99.3	116.7
Lewis Carroll Elementary School	3.81	139.2	99.7	117.3
Cocoa	3.45	138.4	98.8	116.3
Cocoa Beach	3.06	137.3	97.7	115.1
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	12.85	149.8	110.7	129.2
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 64. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (115-Degree) Heading:
Winter Day**

Point of Interest	Peak Overpressure (psf)	Lpeak (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	7.06	144.6	106.0	123.7
SpaceX Operations Area	7.65	145.3	106.5	124.4
Titusville Beach	25.11	155.6	117.3	136.5
Playalinda Beach	9.57	147.2	108.9	126.8
Kennedy Space Center Visitor Complex	6.65	144.1	105.3	123.0
KSC Child Development Center	7.09	144.6	105.9	123.7
Merritt Island National Wildlife Refuge Visitor Center	5.89	143.0	104.5	122.2
Pine Island Conservation Area/Pine Island Estates	4.81	141.2	102.5	120.0
Kings Park Estates - Courtenay	4.13	139.9	100.2	118.0
Jetty Park Campground	4.13	139.9	100.7	118.2
Rockledge High School	2.44	135.4	96.1	113.6
Merritt Island	2.99	137.1	97.5	114.9
Oak Park Elementary School				
Titusville High School	0.11	109.2	86.8	104.8
Summerwood Villas	2.74	136.3	99.2	116.3
Atlantis Elementary School	3.06	137.3	98.7	116.2
Fairglen Elementary School	3.25	137.8	98.2	115.7
Lewis Carroll Elementary School	3.56	138.6	98.5	116.1
Cocoa	3.08	137.4	97.9	115.3
Cocoa Beach	3.07	137.4	98.1	115.3
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	12.43	149.5	111.4	129.4
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

**Table 65. Sonic Boom Metrics at Points of Interest: Super Heavy Descent: (115-Degree) Heading:
Winter Night**

Point of Interest	Peak Overpressure (psf)	L _{peak} (dB)	ASEL (dB)	Perceived Loudness (PLdB)
Cape Canaveral Space Force Station (CCSFS)	6.89	144.4	105.4	123.3
SpaceX Operations Area	7.57	145.2	106.8	124.5
Titusville Beach	25.15	155.6	117.2	136.4
Playalinda Beach	8.95	146.6	107.7	125.8
Kennedy Space Center Visitor Complex	6.09	143.3	104.8	122.4
KSC Child Development Center	6.47	143.8	105.1	122.8
Merritt Island National Wildlife Refuge Visitor Center	4.99	141.6	103.0	120.6
Pine Island Conservation Area/Pine Island Estates	4.40	140.5	102.0	119.4
Kings Park Estates - Courtenay	3.69	138.9	100.0	117.4
Jetty Park Campground	4.02	139.7	100.3	117.9
Rockledge High School				
Merritt Island	2.90	136.9	96.6	114.0
Oak Park Elementary School				
Titusville High School	0.17	112.7	87.3	105.0
Summerwood Villas	0.29	117.0	85.9	103.2
Atlantis Elementary School				
Fairglen Elementary School	2.45	135.4	95.8	112.9
Lewis Carroll Elementary School	3.00	137.1	97.1	114.6
Cocoa	1.94	133.4	93.3	110.5
Cocoa Beach	2.98	137.1	97.2	114.6
Pinegrove Estates				
Fern Meadows				
KSC Office Outside BDA	12.16	149.3	111.3	129.2
The Rock Church				

Notes: psf = Pounds per Square Foot; dB = decibels; ASEL = A-weighted Sound Exposure Level; PLdB = Perceived Level in decibels. Cells with no data indicate that POI was outside of the sonic boom footprint.

4 REFERENCES

1. Bradley, K.A., Wilmer, C.B., "Starship Rocket Noise Assessment for Flight and Test Operations at Kennedy Space Center Launch Complex 39-A," KBR TN25-01, April 2025.

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