Coordination of Wind Energy & Military Operations in Texas

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Agenda

- Background
- Accomplishments
- Report
- Notification Areas
- Web Tool
- Additional Info
Approach

- DoD Office of Economic Adjustment grant with matching funds from Texas Military Preparedness Commission
- Goal: Identify present and future incompatible land use activities that may limit the military’s test and training mission, with an emphasis on wind energy development

Background

- Develop/update tools that facilitate early engagement among industry, military and community stakeholders
  - Report
  - Web based tool

We did not identify exclusion areas or produce Red-Yellow-Green maps
Accomplishments

- Stakeholder engagement
  - Workshops/conference calls with military, industry (individual developers & AWEA) & communities
  - Last workshop at Sheppard AFB on 8 AUG
    - Input on draft report
    - Demonstrate initial version of web tool
    - Base tour
    - Windfarm tour
- Report
- Texas Early Notification Tool (TENT)
- Joint TMPC/AWEA/NRI Press Release & Media Kit
Report

- Military Assets in Texas
  - Military Installations & Radars
  - Military Airspace
  - Additional Operating Areas
- Weather Radars
- Wind Energy
  - Competitive Renewable Energy Zones
  - Impacts of Wind Energy on Military Missions
  - Mitigations
- Texas Early Notification Areas
- Other Encroachment Issues
  - Solar Energy
  - Tall Structures
- Legislation And Regulations
- Texas Early Notification Tool
Early Notification Areas

- **Installations**
  - 25 nm: consistent with SB277

- **Special Use Airspace & Military Training Routes**
  - ≤1,500 ft AGL

- **Radars**
  - Line of sight for structures ≥ 750 ft AGL

- **Additional Operating Areas**
  - Dyess AFB Tennyson C-130 Drop Zone
  - Snyder Electronic Scoring Site (ESS): 1 nm
  - Dyess AFB Remote Threat Emitter sites: ½
  - Dyess AFB Low Altitude Tactical Navigation (LATN) area
  - Sheppard AFB Radar Approach Control (RAPCON) airspace
  - Fort Bliss Maintenance Test Flight (MTF) areas
  - Fort Bliss High Altitude Mountainous Environmental Training Site (HAMETS)
  - Fort Hood Western Training Area (WTA)

These are not exclusion areas
Installation Notification Areas
SUA & MTRs ≤ 1,500 ft AGL
Radar Line of Sight
Additional Operating Areas
Combined Notification Area
Texas Early Notification Tool

https://tent.nri.tamu.edu/

Link to report is available on the tool website
Follow-on Efforts

- OEA proposal pending
- Additional workshops/engagement
- Maintain/update TENT
- Reports/web tool on additional encroachment issues
Web Tool Screenshots
Step 1: Data
Please upload a shapefile or draw an area you would like to have an analysis run on.

Buffer New Graphics

Step 2: Run Analysis
Graphics specifically drawn and uploaded to this widget will be used for the analysis.

Ran Intersect

Step 3: Results
Once you have finished importing or drawing your graphics, your results will show here!
Step 1: Data
Please upload a shapefile or draw an area you would like to have an analysis run on.

Create Report

Step 2: Run Analysis
Graphics specifically drawn and uploaded to this widget will be used for the analysis.

Run Analysis

Step 3: Results
Once you have finished importing or drawing your graphics, your results will show here!
Step 1: Data
Please upload a shapefile or draw an area you would like to have an analysis run on.
- Draw
- Upload
- Clear
Buffer New Graphics:

Step 2: Run Analysis
Graphics specifically drawn and uploaded to this widget will be used for the analysis.
- Run Intersect

Step 3: Results
Once you have finished importing or drawing your graphics, your results will show here!
Overview

The military requires the use of several assets, including installations, airspace, radars and additional operating areas to maintain its operational capability. In addition, weather radars called NEXRAD, are critical in weather forecasting for both the military and public at large. Early engagement among military, industry, NOAA and community stakeholders has proven to be the most effective approach to ensuring any development is compatible with the military mission while minimizing both delays in project completion and additional financial burdens to energy developers.

Based on the study area you selected, the following sections identify military assets that could be impacted and provide points of contact. You should contact them as soon as possible to discuss potential impacts and possible solutions.

Installation (Notification Area)

Some or all of the study area you selected is close to the installation(s) shown and could impact operations at that installation.

<table>
<thead>
<tr>
<th>Name</th>
<th>Installation</th>
<th>Contact</th>
<th>Phone1</th>
<th>Email1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyess AFB - SB 277 (25NM)</td>
<td>Dyess AFB</td>
<td>7 OSS Airspace Management</td>
<td>775-699-3666</td>
<td><a href="mailto:john.gallagher.20@us.af.mil">john.gallagher.20@us.af.mil</a></td>
</tr>
</tbody>
</table>
### Military Training Route (Below 1,500')

Some or all of the study area you selected is within the footprint of one or more Military Training Routes with floors of 1,500 feet or less above ground level.

<table>
<thead>
<tr>
<th>Name</th>
<th>Segment</th>
<th>Installation</th>
<th>Contact1</th>
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<th>Email1</th>
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<tbody>
<tr>
<td>VR-1143</td>
<td>C - D</td>
<td>Sheppard AFB</td>
<td>80 OSS Airspace Management</td>
<td>940-676-5691</td>
<td><a href="mailto:60oss.airspacemanagement@us.af.mil">60oss.airspacemanagement@us.af.mil</a></td>
</tr>
<tr>
<td>SR-251</td>
<td>E - F</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
</tr>
<tr>
<td>SR-254</td>
<td>E - F</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
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<tr>
<td>SR-223</td>
<td>H - I</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
</tr>
<tr>
<td>SR-249</td>
<td>A - B</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
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<tr>
<td>SR-245</td>
<td>A - B</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
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<tr>
<td>SR-242</td>
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<td>317 OSS Airspace Management</td>
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<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
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<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
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<td>SR-249</td>
<td>F - G</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
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<td>SR-226</td>
<td>A - B</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
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<td>SR-267</td>
<td>A - B</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
</tr>
<tr>
<td>SR-273</td>
<td>A - B</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
</tr>
<tr>
<td>SR-244</td>
<td>A - B</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
</tr>
<tr>
<td>SR-234</td>
<td>A - B</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2374</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
</tr>
</tbody>
</table>

### Additional Operating Area

Some or all of the study area you selected is close to a special operating area used by the military for training and/or testing.

<table>
<thead>
<tr>
<th>Name</th>
<th>Installation</th>
<th>Contact1</th>
<th>Phone1</th>
<th>Email1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATN</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2372</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
</tr>
<tr>
<td>Approach/Departure Clearance (Y-LZ)</td>
<td>Dyess AFB</td>
<td>317 OSS Airspace Management</td>
<td>254-586-2372</td>
<td><a href="mailto:darshan.subramanian.1@us.af.mil">darshan.subramanian.1@us.af.mil</a></td>
</tr>
</tbody>
</table>

### Radar (Notification Area)

Some or all of the study area you selected is within the line-of-sight of military or weather radar(s) and could impact its capability.

<table>
<thead>
<tr>
<th>Name</th>
<th>Installation</th>
<th>Contact1</th>
<th>Phone1</th>
<th>Email1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyess AFB (NEXRAD)</td>
<td>Dyess AFB</td>
<td>7 OSS Airspace Management</td>
<td>254-596-3544</td>
<td><a href="mailto:john.gallagher.20@us.af.mil">john.gallagher.20@us.af.mil</a></td>
</tr>
<tr>
<td>Dyess ASR (at Abilene Regional Airport)</td>
<td>Dyess AFB</td>
<td>7 OSS Airspace Management</td>
<td>254-596-8910</td>
<td><a href="mailto:dave.garza.1@us.af.mil">dave.garza.1@us.af.mil</a></td>
</tr>
</tbody>
</table>