

Southeast Region Federal Construction

“Light” Virtual: October 27-28

2021 SUMMIT

In-Person: April 6-7

2022 SUMMIT

Infrastructure & Environmental Summit

Virginia

North Carolina

South Carolina

Georgia

Florida

Hosted by:

Office of Senator Richard Burr

Office of Senator Thom Tillis

North Carolina Military Business Center



Offshore Wind Energy Target for N.C. - How Will it Work with the Military in the State?

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Virginia North Carolina South Carolina Georgia Florida

October 27, 2021

0945-1045



Presenters

- **Moderator: Diane Cherry, Federal Business Development, North Carolina Military Business Center**
- Paul Olsen, Executive Director, Programs and Partnerships, Research, Old Dominion University
- Amanda Mayhew, Permitting Manager, Kitty Hawk Offshore Wind, Avangrid Renewables
- Geoff Blackman, Principal, Westslope Consulting



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**Kitty Hawk Offshore Wind
Southeast Region Federal Construction, Infrastructure & Environmental Summit**

27 October 2021

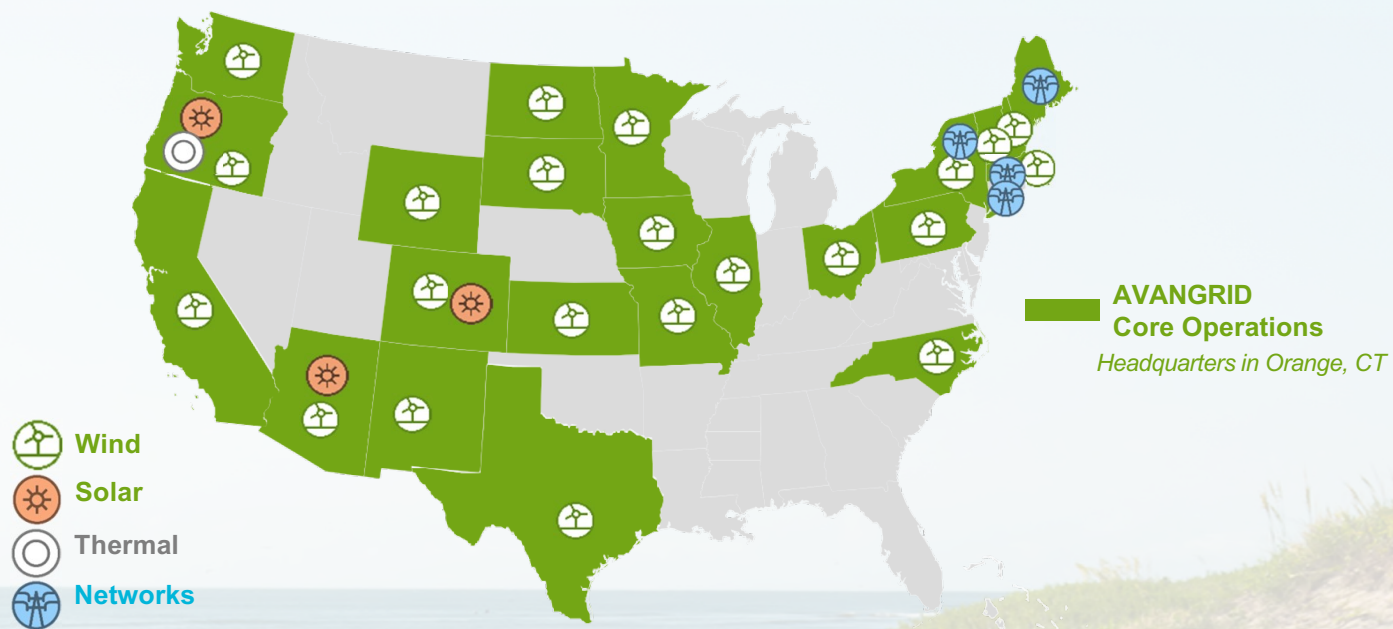


Avangrid's Geographic Presence

~ \$39 billion in assets with a presence in 24 states

3rd largest wind operator in the U.S.

> 8 GW wind & solar in operation



Avangrid Renewables is Part of Iberdrola's Global Offshore Wind Portfolio





Kitty Hawk Offshore Wind Project Goals

- Deliver sustainable, safe, and healthy domestic energy generation for all Americans through the responsible production of electricity using wind turbine generators.
- Contribute to the Biden Administration's goal of delivering 30 gigawatts (GW) of offshore wind by 2030.
- Contribute to the Virginia Clean Economy Act which mandates the procurement of 5.2 GW of offshore wind by 2034 and to North Carolina's goal to develop 2.8GW by 2030.
- Efficiently and responsibly construct and operate an offshore wind energy facility that enhances the quality and long-term productivity of renewable wind resources located on the Outer Continental Shelf.
- Deploy technically and economically feasible infrastructure that maximizes the sustainable electrical generation within Lease Area OCS-A 0508.



Leasing

2017

Lease awarded and executed

Kitty Hawk given exclusive rights to develop lease area for offshore wind development



Site Assessment

2018

2019

2020

2021

Site Assessment Plan approved

Construction and Operations Plan submitted for first project

BOEM anticipated to start their Environmental Review under NEPA

Initiate state approval process



Construction and Operation

2022

2023

2024

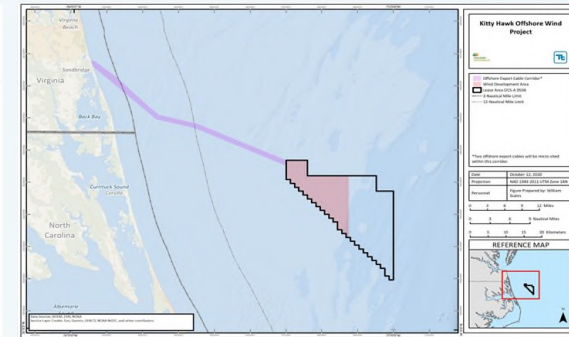
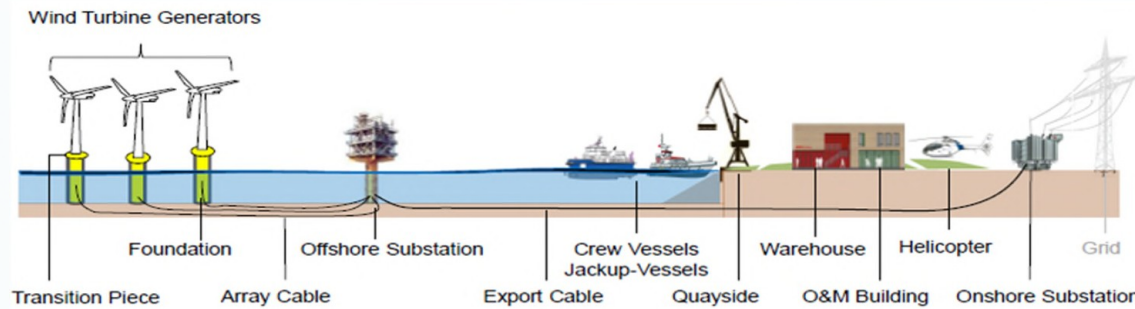
2025

2026

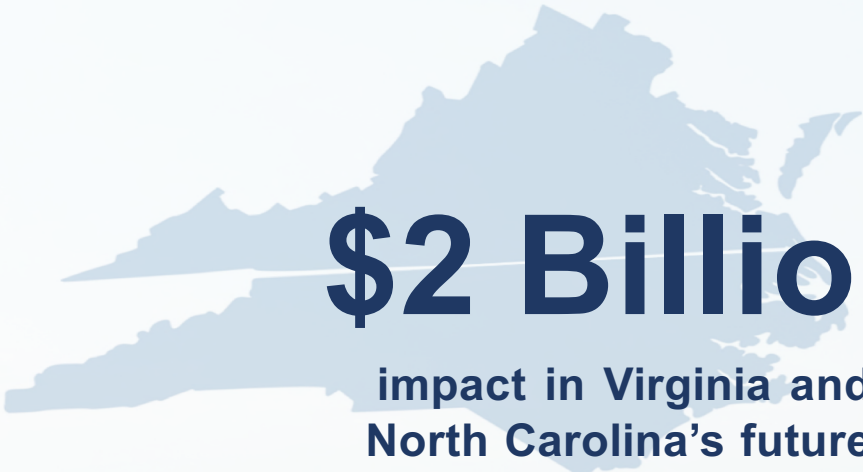
All necessary permits, authorizations and approvals received for construction and operation

Construction anticipated to start mid-2020s with first power mid-late 2020s

Operation period is anticipated to be 25+ years



Location:	Due east of Corolla, NC and southeast of Virginia Beach, VA	Wind Energy Area:	100% site control under lease agreement with BOEM (signed in 2017).
Lease Area	Total area: 122,405 acres	Site Control:	Landfall: Easement discussion with City Route: Non-exclusive Franchise Agreement Substation: 30-acre option agreement with VBDA
BOEM Process:	Filed COP in December 2020 Notice of Intent and Scoping Complete	Permitting:	In process: site assessment studies, marine geophysical and geotechnical surveys, and preliminary engineering incorporated into Construction and Operations Plan (submitted to Bureau of Ocean Energy Management in December 2020).
COD:	2026	Inter-connection:	Birdneck- Landstown 230 kV In queue with PJM – in Facility Study phase



\$2 Billion

impact in Virginia and
North Carolina's future
over the next decade.



**\$1.5 Billion in
Construction Activities
and Sales**



~800 Jobs Annually



**\$390 Million in Net
Household Earnings**



**\$100 Million in Tax
Revenue**



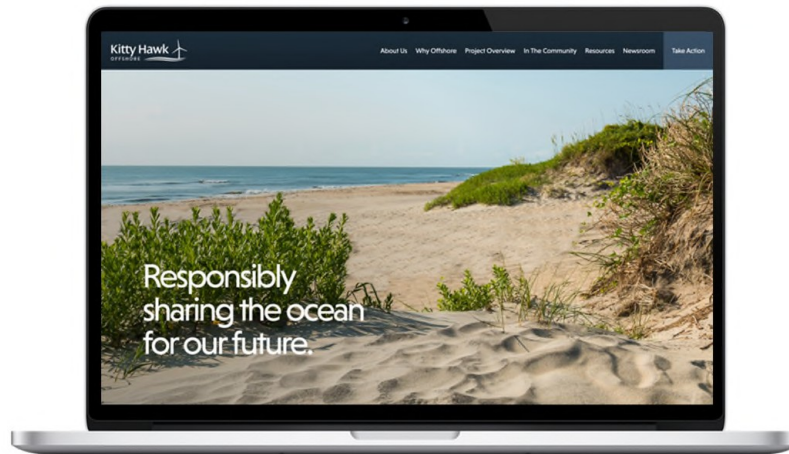
KITTY HAWK OFFSHORE WIND'S SELF-GUIDED OPEN HOUSE IS NOW OPEN

Hosted by:

Kitty Hawk
OFFSHORE 

 **AVANGRID
RENEWABLES**

KITTYHAWKOFFSHORE.COM



- Project Updates
- Videos
- Fact Sheets
- Resources

Community Information

Fishing Community

kittyhawkoffshore.com/fishing

- Close coordination with commercial and recreational fishing communities
- Meteorological buoy (access to real-time data)

Military Community

kittyhawkoffshore.com/military

Workforce Development

Mid-Atlantic Wind Training Alliance

Economic Development

kittyhawkoffshore.com/vendors

- Market engagement initiative to qualify vendors for future procurements

LinkedIn & Facebook
Kitty Hawk Offshore Wind

Twitter
@kittyhawkwind

Instagram
@kittyhawkoffshore

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North Carolina Radar

**Offshore Wind Energy Target for North Carolina: How Will it Work
with the Military in the State?**

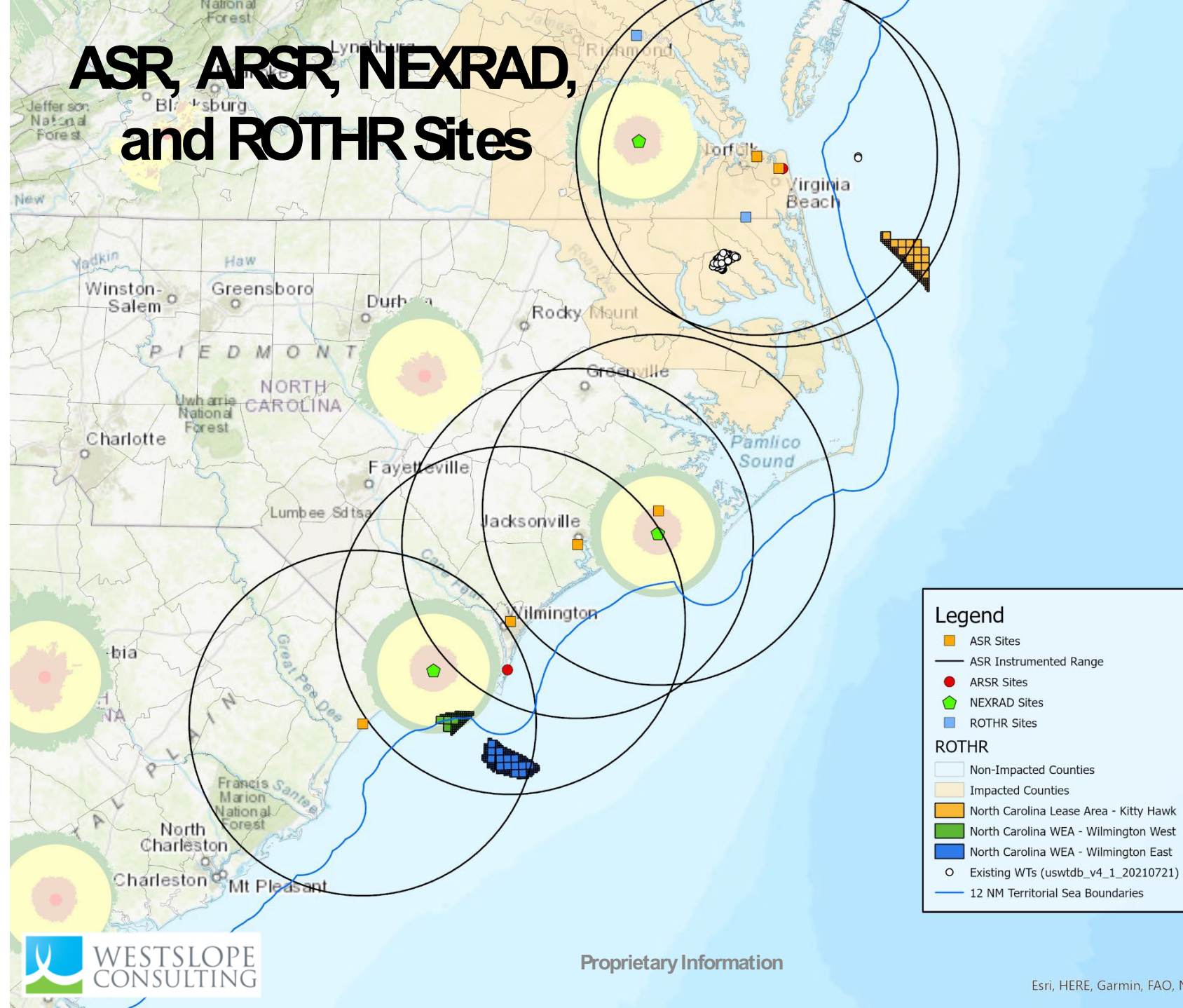
Examples of DoD and FAA Radar Types on the Coast

- **Airport Surveillance Radar (ASR)**
 - ASR-8
 - ASR-9
 - ASR-11 (aka AN/ GPN-30 or DASR)
- **Air Route Surveillance Radar (ARSR)**
 - ARSR-4
- **Next Generation Radar (NEXRAD) weather radar (aka WSR-88D)**
- **Relocatable Over-the-Horizon Radar (ROTHR)**
- **Advanced Dynamic Aircraft Measurement System (ADAMS)**

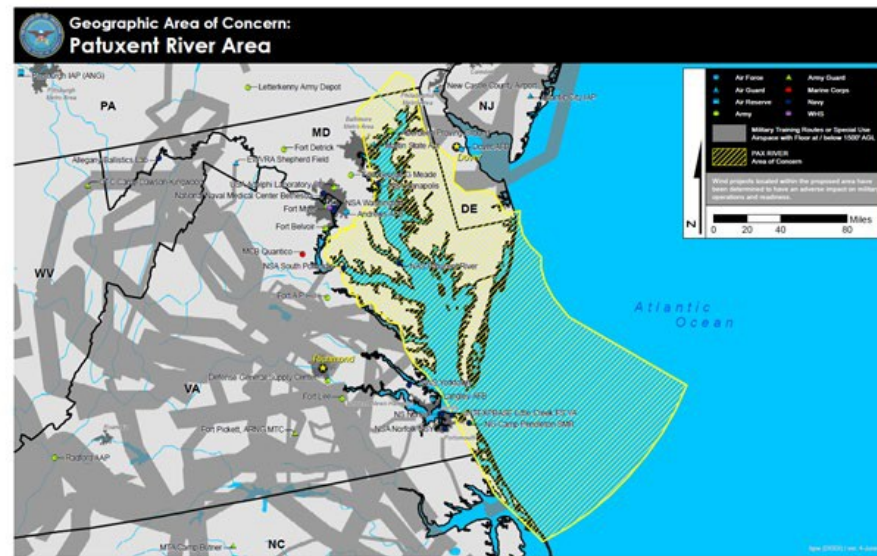
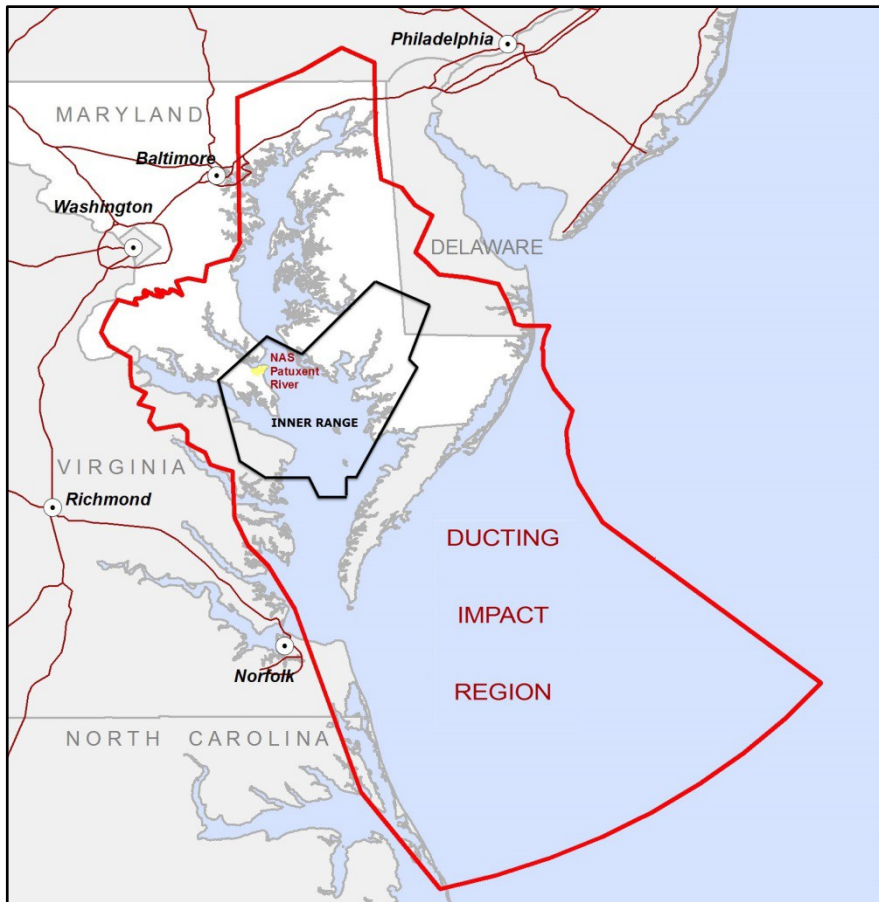


Wind turbines near the Johnstown, Pennsylvania ASR-11

ASR, ARSR, NEXRAD, and ROTHRSites



ADAMS



Review Processes

- **Developer due diligence:**
 - Radar line-of-sight analysis
 - Next Generation Radar (NEXRAD) weather radar screening analysis
 - Areas of concern review
- **Informal processes**
 - DoD Informal Review
 - National Telecommunication and Information Administration (NTIA) submission
- **Formal processes**
 - BOEM
 - See <https://www.boem.gov/renewable-energy/regulatory-framework-and-guidelines>.
 - FAA Obstruction Evaluation/Airport Airspace Analysis (OE/AAA)
 - 14 CFR Part 77
 - See https://www.faa.gov/air_traffic/obstruction_evaluation/ and <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>.
 - DoD Military Aviation and Installation Assurance Siting Clearinghouse (“DoD Siting Clearinghouse”)
 - 32 CFR Part 211
 - Mitigation Response Team
 - See <https://www.acq.osd.mil/dodsc/>.

Mitigation

- **Overlapping coverage**
- **Optimization (aka Radar Adverse Impact Mitigation)**
- **Radar mitigation agreement**
 - **Voluntary contribution**
 - **Curtailment**
- **Future:**
 - **Radar upgrades**
 - **New radar technology**

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QUESTIONS



*Registration is open: 2022 SE Region Federal Construction,
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<https://summit.ncmbc.us>*