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NOAA Response to *Report on Radar Gaps*

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Outline

- Current & Future Plans to Improve Radar Coverage
- Summary of Recommendation Response
- NOAA Actions in Response to Report
- Challenges and/or Opportunities with Implementation of Recommendations
- Path forward and future engagement with the SAB



Plans to Improve Coverage



- Already incorporated Terminal Doppler Weather Radars (TDWR) to improve coverage at lower elevations
- Leveraging some commercial data
- Lowered beam angles to improve coverage at lower elevations

- Continue to improve coverage at lower elevations
- Address emerging issues to ensure continuity of coverage
- Seek additional data to improve coverage and fill gaps

- Evaluate Phased Array Technology and other radar technology for follow-on to current radars
- Initiate acquisition of follow-on radars



Next

CRADA To Evaluate Commercial X-Band Data

- NWS/OAR Cooperative Research and Development Agreement (CRADA) with Climavision
- Scope includes evaluation of X-Band radar data
- Results will inform future radar program

Purchase Commercial Radar Data

- Use National Mesonet Program or Other Mechanism to Purchase Commercial Data
- Determined by Availability of Data and Areas of Need

Not Resourced



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Future Efforts

Evaluation of PAR

- NOAA's Office of Oceanic and Atmospheric Research evaluating Phased Array Radar (PAR) technology
- Potential of improved ability to detect and characterize storms

Formulation of Follow-on Program

- Requires a formal program to balance resources, requirements and acquisition to deliver new radars
- Seek industry input and evaluate commercial options
- Conduct a formal Analysis of Alternatives

Acquisition

- Risk reduction activities
- Development of radars

Deployment

- Deploy radars and supporting capabilities across the Nation
- Benefits could include:
 - Replacing aging technology
 - Expanded Coverage
 - Improved timeliness of severe weather detection and characterization
 - Enable high resolution modeling to assist with "Warn on Forecast"

Not Resourced



Summary of Recommendation Response

No.	Recommendation	NOAA Response
1	Gap-filling radar strategy; Define backbone architecture	Concur
2	Leverage commercial data already available	Concur
3	Act immediately to implement gap-filling radar strategy	Partially Concur due to insufficient resources



NOAA Actions in Response to Report

- Working with OAR to enlist outside expertise (MIT-LL) to define an ideal backbone and evaluate operational utility of Climavision X-band data
- Leveraging commercial data buys to improve current low-level coverage gaps
- Formulating Radar Next program to improve and enhance national weather radar capabilities



Challenges and/or Opportunities

- Challenge: Gap-filling strategy will have to be developed before it can be implemented, so NOAA will not be able to act immediately
- Opportunities:
 - Design & implementation of a backbone network architecture will depend on available funding and resources through Radar Next program
 - National Mesonet Program provides opportunities to implement additional data buys in the future
 - Radar Next initiatives will solidify our strategic National radar network solution



Path Forward and Future Engagement with the SAB

- SAB advocacy for Radar Next program funding at required levels to improve/enhance weather radar capabilities, geographic coverage, low-level wind/precip detection, and creation/distribution of improved data products
- Provide updates to SAB on Radar Next initiatives