Senate Commerce Committee Nominee Questionnaire, 119th Congress

Instructions for the nominees: The Senate Committee on Commerce, Science, and Transportation (the "Committee") requests that you provide typed answers to each of the following questions. It is also requested that you type the question in full before each response. Do not leave any questions blank. Type "None" or "Not Applicable" if a question does not apply to you. Begin each section (*i.e.*, "A", "B", etc.) on a new sheet of paper. Electronically submit your completed questionnaire to the Committee in PDF format and ensure that sections A through E of the completed questionnaire are in a text searchable and that any hyperlinks are active and can be clicked. Section F may be scanned for electronic submission and need not be searchable.

Incomplete questionnaires may delay the nomination process.

A. BIOGRAPHICAL INFORMATION AND QUALIFICATIONS

1. Name (Include any former names or nicknames used):

Neil Andrew Jacobs Jr.

2. Position to which nominated:

Under Secretary of Commerce for Oceans and Atmosphere

3. Date of Nomination:

February 3, 2025

4. Address (List current place of residence and office addresses):

[redacted]

5. Date and Place of Birth:

December 12, 1973. Colorado Springs, CO.

6. Provide the name, position, and place of employment for your spouse (if married) or domestic partner, and the names and ages of your children (including stepchildren and children by a previous marriage).

Jennifer Modliszewski, Lineberger Bioinformatics Core, UNC
[redacted]

7. List all college and graduate schools attended, whether or not you were granted a degree by the institution. Provide the name of the institution, the dates attended, the degree received, and the date of the degree.

Ph.D. Atmospheric Science (Numerical modeling). 2005, North Carolina State University
M.S. Atmospheric Science (Air-sea interaction), 2000, North Carolina State University
B.S. Physics and Math, 1996, University of South Carolina

8. List all post-undergraduate employment, including the job title, name of employer, and inclusive dates of employment, and highlight all management- level jobs held and any non-managerial jobs that relate to the position for which you are nominated.

2022-2025, Chief Science Advisor, Unified Forecast System, University Corporation for Atmospheric Research
2022-2025, Senior Executive Advisor, Booz Allen Hamilton
2021-2025, Managing Director, AxioScientia, LLC
2018-2021, Assistant Secretary of Commerce for Environmental Observation and Prediction, Department of Commerce, NOAA
2013-2018, Chief Atmospheric Scientist, Panasonic Avionics Corporation
2004-2013, Director of Research and Business Development, AirDat, LLC

9. Attach a copy of your resume.

10. List any advisory, consultative, honorary, or other part-time service or positions with Federal, State, or local governments, other than those listed above after 18 years of age.

I have never had a position in Federal, State, or local government other than the one listed above.

11. List all positions held as an officer, director, trustee, partner, proprietor, agent, representative, or consultant of any corporation, company, firm, partnership, or other business, enterprise, educational, or other institution.

American Meteorological Society (AMS) Visiting Senior Policy Fellow
American Meteorological Society (AMS) Forecast Improvement Group (Chair 2015-2017)
Federal Aviation Administration (FAA) Continuous Lower Emissions, Energy, and Noise
World Meteorological Organization Expert Team on Aircraft-Based Observing Systems

12. List all memberships you have had after 18 years of age or currently hold with any civic, social, charitable, educational, political, professional, fraternal, benevolent or religiously affiliated organization, private club, or other membership organization (You do not have to list your religious affiliation or membership in a religious house of worship or institution). Include dates of membership and any positions you have held with any organization. Please note whether any such club or organization restricts membership on the basis of sex, race, color, religion, national origin, age, or disability.

American Meteorological Society (Fellow)
National Weather Association
World Meteorological Organization; Expert Team on Aircraft-Based Observing Systems
American Geophysical Union
Gamma Beta Phi, National Honor Society
Geological Society of America
National Forensics League
Phi Beta Kappa, Honor Society
Pi Mu Epsilon, National Math Honor Society
Sigma Pi Sigma, National Physics Honor Society (President: 1993-1996, USC Chapter)
Sigma Xi, Honor Society
Durham YMCA
Greensboro Velo Club
Rotary International
Trout Unlimited

13. Have you ever been a candidate for and/or held a public office (elected, non-elected, or appointed)? If so, indicate whether any campaign has any outstanding debt, the amount, and whether you are personally liable for that debt.

No.

14. List all memberships and offices held with and services rendered to, whether compensated or not, any political party or election committee within the past ten years. If you have held a paid position or served in a formal or official advisory position (whether compensated or not) in a political campaign within the past ten years, identify the particulars of the campaign, including the candidate, year of the campaign, and your title and responsibilities.

None.

15. Itemize all political contributions to any individual, campaign organization, political party, political action committee, or similar entity of $200 or more for the past ten years.

Trump Victory, 2/27/20 - $520
Trump Victory, 9/29/20 - $500

16. List all scholarships, fellowships, honorary degrees, honorary society memberships, military medals, and any other special recognition for outstanding service or achievements.

Fellow, American Meteorological Society
American Meteorological Society's Kenneth C. Spengler Award recipient (2023)
Pi Mu Epsilon, National Math Honor Society
Sigma Pi Sigma, National Physics Honor Society (President: 1993-1996, USC Chapter)
Gamma Beta Phi. National Honor Society
National Forensics League Scholarship
Phi Beta Kappa, Honor Society
Sigma Xi, Honor Society

17. List all books, articles, columns, letters to the editor, Internet blog postings, or other publications you have authored, individually or with others. Include a link to each publication when possible. If a link is not available, provide a digital copy of the publication when available.

Jacobs, N., J. Churchill, L. J. Pietrafesa, S. Bao, and P. T. Gayes, 2023: Ocean-Atmosphere Interactions during the Passage of an Extratropical Cyclone in the Vicinity of Cape Hatteras, North Carolina, *Intl. J. of Geosciences*, 14, 855-876.

Brotzge, J., D. Berchoff, D. Carlis, F. Carr, R. Carr, J. Gerth, B. Gross, T. Hamill, S. E. Haupt, N. Jacobs, A. McGovern, D. Stensrud, G. Szatkowski, I. Szunyogh, and X. Wang, 2023: Challenges and Opportunities in Numerical Weather Prediction. *Bull. Amer. Meteor. Soc.*, 104, 698–705.

Jacobs, N. A., 2021: Open Innovation and the Case for Community Model Development. *Bull. Amer. Meteor. Soc.*, 102(10), 2002-2022.

Droegemeier, K., and N. Jacobs, 2021: Restructuring of U.S. Federal Coordination to Advance Meteorological Services. *Bull. Amer. Meteor. Soc.*, 103(2), 230-247.

Gao, F., Z. Liu, J. Ma, N. Jacobs, P. Childs, and H. Wang, 2019: Variational Bias Correction of TAMDAR Temperature Observations in WRF Data Assimilation System. *Mon. Wea. Rev*., 147, 1927-1945.

Gao, F., X.-Y. Huang, N. Jacobs, and H. Wang, 2018: Assimilation of Wind Speed and Direction Observations: Results from real observation experiments. *Tellus A*, 67,1.

Zhang, X., H. Wang, X.-Y. Huang, F. Gao, and N. Jacobs, 2015: Using Adjoint-Based Forecast Sensitivity Method to Evaluate TAMDAR Data Impacts on Regional Forecasts. *Advances in Meteorology*, Vol. 2015, Article ID 427616, 13.

Jacobs, N., D. Mulally, A. Anderson, J. Braid, P. Childs, A. Huffman, E. Wilson, and F. Gao, 2015: Recent Advancements in the TAMDAR Sensor Network Expansion, (IOAS-AOLS), AMS.

Jacobs, N.., F. Gao, P. Childs, X. Y. Huang, and H. Wang, 2015: Optimization of In-situ Aircraft Observations for Various Assimilation Techniques, (IOAS-AOLS), AMS.

Liu, Y., M. Xu, L. Pan, Y. Liu, N. Jacobs, and P. Childs, 2015: Implementation of a CONUS RTFDDA system with radar data assimilation for convection-resolvable analysis and prediction, (IOAS-AOLS), AMS.

Gao, F., P. P. Childs, X.-Y. Huang, N. A. Jacobs, and J. Z. Min, 2014: A Relocation-based Initialization Scheme to Improve Track-forecasting of Tropical Cyclones. *Adv. Atmos. Sci*., 31(1), 27-36.

Jacobs, N. A., D. J. Mulally, and A. K. Anderson, 2014: Correction of Flux Valve–Based Heading for Improvement of Aircraft Wind Observations. *J. Atmos. Oceanic Technol*., 31, 1733–1747.

Jacobs, N. A., and J. E. Rex, 2013: Benefits and Utility of Tropospheric Airborne Meteorological Data Reporting, *Air Traffic Control Quarterly*, January, First Quarter, 2013.

Huang, X.-Y., F. Gao, N. A. Jacobs, and H. Wang, 2013: Assimilation of wind speed and direction observations: a new formulation and results from idealized experiments. *Tellus A*, 65, 19936.

Wyszogrodzki, A. A., Y. Liu, N. A. Jacobs, P. Childs, Y. Zhang, G. Roux, and T. T. Warner, 2013: Analysis of the surface temperature and wind forecast bias of the NCAR-AirDat operational CONUS 4km RTFDDA forecasting system, *Meteorol. Atmos. Phys*. , 121, 3-4.

Jacobs, N. A., P. Childs, M. Croke, A. Huffman, J. Nelson, J. T. Braid, Y. L. Liu, and X. Y. Huang, 2013: An update on the TAMDAR global network expansion, Special Symposium on Advancing Weather and Climate Forecasts: Innovative Techniques and Applications, Austin, TX.

Nelson, J., J. T. Braid, A. K. Anderson, N. A. Jacobs, P. Childs, M. Croke, and A. Huffman, 2013: Alaska TAMDAR and the RTFDDA WRF QC System, ARAM, AMS, Austin, TX.

Huffman, A., P. Childs, M. Croke, N. A. Jacobs, and Y. L. Liu, 2013: Verification of the NCAR-AirDat operational RT-FDDA-WRF for the 2011 and 2012 spring convective seasons, IOAS, AMS, Austin, TX.

Gao, F., N. A. Jacobs, X. Y. Huang, and P. Childs, 2013: Direct assimilation of wind speed and direction for the WRF model, Special Symposium on Advancing Weather and Climate Forecasts: Innovative Techniques and Applications, AMS, Austin, TX.

Richardson, H., N. A. Jacobs, P. Childs, P. Marinello, and X. Y. Huang, 2013: UAS observations and their impact on NWP during TUFT, ARAM, AMS, Austin, TX.

Gao, F., P. Childs, X. Y. Huang, and N. A. Jacobs, 2013: A new method for vortex relocation within balanced flow field, NWP, Austin, TX.

Gao, F., X. Zhang, N. Jacobs, X.-Y. Huang, Xin Zhang, P. Childs, 2012. Estimation of TAMDAR Observational Error and Assimilation Experiments. *Wea. Forecasting*, 27, 4, 856-877.

Zhang, Y. Y. Liu, N. A. Jacobs, P. Childs, T. Nipen, T. T. Warner, L. D. Monache, G. Roux, A. Wyszogrodzki, W. Y. Y. Cheng, W. Yu, and R.- S. Sheu, 2012: Evaluation of the impact of assimilating the TAMDAR data on WRF-based RTFDDA simulations and the RTFDDA performance on predicting warm-season precipitation over the CONUS, *Wea. Forecasting*, under revision.

Gao, F., X.-Y. Huang, N. Jacobs, 2012: The Assimilation of Wind Speed and Direction Based on WRFDA 3D-Var System, New Orleans, LA.

Zhang, Xiaoyan, X.-Y. Huang, T. Auligne, Xin Zhang, F. Gao, N. Jacobs, P. Childs. 2012. Evaluation of TAMDAR Data Impact on Forecast Error with WRFDA-FSO System, AMS, New Orleans, LA.

Gao, F., Xiaoyan Zhang, X.-Y. Huang, Xin Zhang, N. Jacobs, P. Childs, 2011: Preliminary Results of Directly Assimilating Wind Speed and Direction Based on WRFDA 3D-Var System. 12th WRF Users' Workshop, Boulder, Colorado, 20-24 June 2011.

Liu, Y., T. Warner, S. Swerdlin, T. Betancourt, J. Knievel, B. Mahoney, J. Pace, D. Rostkier-Edelstein, N. A. Jacobs, P. Childs, and K. Parks, 2011: NCAR ensemble RTFDDA: real-time operational forecasting applications and new data assimilation developments. 24th Conference on Weather and Forecasting (WAF-NWP), AMS, Seattle, WA.

Huffman, A., N. A. Jacobs, M. Croke, P. Childs, X. Y. Huang, and Y. Liu, 2011: Verification and Sensitivity of the NCAR-AirDat Operational Forecasting Systems to TAMDAR Observations. 15th Symposium (IOAS-AOLS), AMS, Seattle, WA.

Jacobs, N. A., F. Gao, P. Childs, X. Zhang, X. Y. Huang, X. Zhang, M. Croke, and Y. Liu, 2011: Optimization of In-situ Aircraft Observations for Various Assimilation Techniques. 15th Symposium (IOAS-AOLS), AMS, Seattle, WA.

Jacobs, N. A., M. Croke, P. Childs, Y. Liu, X. Y. Huang, and R. DeJong, 2011: The Utility of TAMDAR in the NextGen-Oriented CLEEN Program. Second Aviation, Range and Aerospace Meteorology Special Symposium on Weather-Air Traffic Management (ARAM), AMS, Seattle, WA.

Croke, M., N. A. Jacobs, D. J. Mulally, A. K. Anderson, J. T. Braid, P. Childs, A. Huffman, Y. Liu, and X. Y. Huang, 2011: Recent Advancements in the TAMDAR Sensor Network Expansion. 15th Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans and Land Surface (IOAS-AOLS), AMS, Seattle, WA.

Jacobs, N. A., P. Childs, M. Croke, Y. Liu, and X. Y. Huang, 2010: An Update on the TAMDAR Sensor Network Deployment, (IOAS¬AOLS), GA.

Jacobs, N. A., M. Croke, P. Childs, and Y. Liu, 2010: The Potential Utility of TAMDAR Data in Air Quality Forecasting, (IOAS), Atlanta, GA.

Childs, P., N. A. Jacobs, M. Croke, Y. Liu, W. Wu, G. Roux, and M. Ge, 2010: An Introduction to the NCAR-AirDat Operational TAMDAR- Enhanced RTFDDA-WRF, (IOAS-AOLS), AMS, Atlanta, GA.

Croke, M., N. Jacobs, P. Childs, and Y. Liu, 2009: The Utility of TAMDAR on Short-Range Forecasts over Alaska, (IOAS), AMS.

Jacobs, N., P. Childs, M. Croke, Y. Liu, and X. Y. Huang, 2009: The Optimization Between TAMDAR Data Assimilation Methods and Model Configuration in WRF-ARW, (IOAS-AOLS), AMS.

Childs, P., N. Jacobs, M. Croke, Y. Liu, and X. Y. Huang, 2009: TAMDAR- Related Impacts on the AirDat Operational WRF-ARW as a Function of Data Assimilation Techniques, (IOAS-AOLS), AMS.

Jacobs, N., P. Childs, M. Croke, and Y. Liu, 2008: The Effects of Horizontal Grid Spacing and Vertical Resolution on TAMDAR Data assimilation in Short-Range Mesoscale Forecasts, AMS Annual Meeting, 12th Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS).

Jacobs, N. A., S. Raman, G. M. Lackmann, and P. P. Childs, Jr, 2007: The influence of the Gulf Stream induced SST gradients on the US East Coast winter storm of 24-25 January 2000. *International Journal of Remote Se*nsing, 29, 6145-6174.

Jacobs, N. A., 2007: Potential benefits of tropospheric airborne meteorological data reporting (TAMDAR). *Managing the Skies*, 5, 3, 20-23.

Liu, Y., T. Warner, S. Swerdlin, W. Yu, N. Jacobs, and M. Anderson, 2007: Assimilation data from diverse sources for mesoscale NWP: TAMDAR-data impact. *Geophysical Research Abstracts*, 9, EGU2007-A-03109.

Liu, Y., N. A. Jacobs, W. Yu, T. T. Warner, S. P. Swerdlin, and M. Anderson, 2007: An OSSE study of TAMDAR data impact on mesoscale data assimilation and prediction, AMS Annual Meeting, 11th Symposium on (IOAS-AOLS) 5.20.

Jacobs, N. A., 2006: The effects of lower-tropospheric data resolution on short-range mesoscale model forecasts of surface temperatures during the summer season, Doc. and Tech. Note AirDat, LLC, 53 pp.

Jacobs, N. A., and Y. Liu, 2006: A comprehensive quantitative precipitation forecast statistical verification study, Doc. and Tech. AirDat 25 pp.

Jacobs, N. A., Y. Liu, and C.-M. Druse, 2006: Evaluation of temporal and spatial distribution of TAMDAR data in short-range mesoscale forecasts, AMS Annual Meeting, 10th Symp. IOAS-AOLS.

Jacobs, N. A., S. Raman, and G. M. Lackmann, 2006: Sensitivity of East Coast winter storms to sea surface temperature gradients, AMS Annual Meeting, 14th Conf. Sea-Atmos.

Jacobs, N. A., G. M. Lackmann and S. Raman 2005: The combined effects of Gulf Stream–induced baroclinicity and upper-level vorticity on U.S. East Coast extratropical cyclogenesis. *Mon. Wea. Rev*., 133, 2494–2501.

Jacobs, N. A., 2004: Porting MM5 to OS X: A guide to mesoscale modeling on a G5, *Mac OSX Hints*, 15, 97.

Jacobs, N., 2004: The Role of Marine Thermal Gradient Structure on Gulf Stream-Related Extratropical Cyclogenesis, Ph.D. Dissertation, Department of Marine, Earth, and Atmospheric Science, North Carolina State University, Raleigh, NC. 307pp.

Jacobs, N. A., S. Raman, G. M. Lackmann, and P. P. Childs, Jr, 2004: Role of the Gulf Stream on extratropical cyclogenesis, AMS Annual Meeting, 20th Conf. WAF/NWP pp. 318-322.

Raman, S., N. Jacobs, and M. Simpson, 2003: Numerical simulation of land-air-sea interactions during the northeasterly monsoon over Indian Ocean. INDOEX conf. Bangalore, India.

Jacobs, N. A., 2001: Latent and sensible heat fluxes over the Gulf Stream region during OMP. AGU, Boston, MA. Preprint pp 412-417.

Jacobs, N., 2000: Physical Oceanographic Processes and Air-Sea Interactions of extratropical cyclogenesis during the Oceans Margins Program, Thesis, Department of Marine, Earth, and Atmospheric Science, North Carolina State University, Raleigh, NC. 178pp.

Jacobs, N., C. Petrusak, V. Connors, D. DeMaster, T. Hopkins, 1998: Earth System Science: Integration of Computer Modeling and Laboratory Studies. 25 conf GSA/ESSE, pp. 127-131.

Jacobs, N., V. Connors, T. Hopkins, D. DeMaster, W. Sweet, 1998: The Evolution of Earth System Science at North Carolina State University. 25 conf GSA/ESSE, pp. 417-421.

18.List all speeches, panel discussions, and presentations (e.g., PowerPoint) that you have given on topics relevant to the position for which you have been nominated. Include a link to each publication when possible. If a link is not available, provide a digital copy of the speech or presentation when available.

Unified Forecast System (UFS) overview, American Meteorological Society.
UFS community governance, AMS/UIFCW
Open innovation and UFS, AMS/UIFCW
Advances in NWP and data assimilation, AMS/AGU
Agency budget process, AMS policy colloquium
Overview of NWP and open innovation
AMS advancements in UFS applications
PWS global ensemble system, NCEP
PWS global model and data assimilation, UK Met Office
Assimilation of ABOs into a global modeling system, ECMWF
Estimation of TAMDAR Error and Assimilation Experiments, UK Met Office
Utility of TAMDAR aircraft observations for NWP, ECMWF
Optimization of TAMDAR for NWP, NCEP EMC
Operational forecasting with TAMDAR, SMN
Unique aspects of aircraft data assimilation, ECMWF

19.List all public statements you have made during the past ten years, including statements in news articles and radio and podcasts and television appearances, which are on topics relevant to the position for which you have been nominated, including dates. Include a link to each statement when possible. If a link is not available, provide a digital copy of the statement when available.

I've done a few podcasts on modeling, weather and science, and was a regular host on the weatherbrains podcast. The topics almost always pertained to numerical weather prediction.
http://weatherbrains.com

https://www.youtube.com/@WeatherBrains/streams
https://art19.com/shows/weather-geeks/
https://art19.com/shows/off-the-radar

20.List all digital platforms (including social media and other digital content sites) on which you currently or have formerly operated an account, regardless of whether or not the account was held in your name or an alias. Include the full name of an "alias" or "handle", including the complete URL and username with hyperlinks, you have used on each of the named platforms. Indicate whether the account is active, deleted, or dormant. Include a link to each account if possible.

I do not have any social media presence, and I am not on LinkedIn.

21.Please identify each instance in which you have testified orally or in writing before Congress in a governmental or non-governmental capacity and specify the date, committee, and subject matter of each testimony.

Winning in Weather: U.S. Competitiveness in Forecasting and Modeling (6 March 2024) - House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Environment

National Oceanic and Atmospheric Administration Organic Act (18 April 2023) - House of Representatives, Committee on Science, Space, and Technology, Full Committee

Senate Confirmation: Under Secretary of Commerce for Oceans and Atmosphere (11 March 2020); United States Senate, Subcommittee on Commerce, Justice, Science and Related Agencies

Examining Opportunities to Improve Prevention and Response of SASH at NOAA (27 February 2020) - House of Representatives, Committee on Natural Resources, Subcommittee on Oversight and Investigations

A Task of EPIC Proportions: Reclaiming U.S. Leadership in Weather Modeling and Prediction (20 November 2019) - House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Environment

The Future of Forecasting: Building a Stronger U.S. Weather Enterprise (16 May 2019) - House of Representatives, Committee on Science, Space, and Technology, Subcommittee on the Environment

A Review of the NOAA Fiscal Year 2020 Budget Request (30 April 2019) - House of Representatives, Committee on Science, Space, and Technology, Subcommittee on the Environment

Review of the FY2020 Budget Request for the U.S. Department of Commerce (2 April 2019) - United States Senate, Committee on Appropriations, Subcommittee on Commerce, Justice, Science and Related Agencies

The National Oceanic and Atmospheric Administration's Budget Request for Fiscal Year 2020 (27 March 2019) - House of Representatives, Committee on Appropriations, Subcommittee on Commerce, Justice, Science, and Related Agencies

Understanding the Changing Climate System and the Role of Climate Research (26 February 2019) - House of Representatives, Committee on Appropriations, Subcommittee on Commerce, Justice, Science, and Related Agencies

Surveying the Space Weather Landscape (26 April 2018) - House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Space

Senate Confirmation: Assistant Secretary of Commerce for Observation and Prediction (1 November 2017); United States Senate, Subcommittee on Commerce, Justice, Science and Related Agencies

Leading the Way: Examining Advances in Environmental Technology (21 June 2017) - House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Environment

Private Sector Weather Forecasting: Assessing Products and Technologies (8 June 2016) - House of Representatives, Committee on Science, Space, and Technology. Subcommittee on Environment

22. Given the current mission, major programs, and major operational objectives of the department/agency/commission/corporation to which you have been nominated, what in your background or employment experience do you believe affirmatively qualifies you for appointment to the position for which you have been nominated, and why do you wish to serve in that position?

I gained significant experience and understanding of NOAA's operations after previously serving as both the Assistant Secretary of Commerce for Environmental Observation and Prediction (2018-2021) and acting Under Secretary of Commerce of Oceans and Atmospheres from 2019 to 2021. I have a very detailed understanding of what is involved in managing NOAA from the policy, budget, and personnel side to needs and opportunities for innovative solutions to better meet the mission requirements. I previously led the agency's effort to support the scientific community through focused improvements to its external engagement strategy. This culminated in the Earth Prediction Innovation Center, which is bringing together the scientific expertise from federal partners, world-class researchers, and the private sector. I also understand that to be successful, NOAA must embrace new partnerships. In 2019, under my leadership, NOAA unveiled the Big Data Project, now called NOAA Open Data Dissemination (NODD), where the public has greater access to all NOAA data through partnerships with Google, Amazon, and Microsoft.

I have extensive experience with public-private-academic partnerships for weather model and observing system development. As a founding member of Panasonic Avionics weather division's predecessor company AirDat, I directed the private side of the NWS's very first atmospheric commercial observational data acquisition as a subscription service. This is a great example of a successful public-private partnership that is still in existence today. Having worked alongside NOAA and NWS employees and scientists as a scientific collaborator, I have earned their trust and respect. Additionally, I have great working relationships with key World Meteorological Organization member countries and their respective National Meteorological Service Directors.

Prior to focusing my career on numerical weather prediction, I worked as both a marine electronics technician and a recreational saltwater inshore fishing guide. I have a unique appreciation for the recreational boating industry and an extensive knowledge of coastal marine fisheries conservation spanning the Carolinas to the Florida Keys.

23. What do you believe are your responsibilities, if confirmed, to ensure that the department/agency/commission/corporation has proper management and accounting controls, and what experience do you have in managing a large organization?

My responsibility, as the NOAA Administrator, will be to work closely with NOAA line offices, and provide leadership to better manage the agency's assets in their service to the American people. As duly confirmed by the Senate, and as political appointees, we have an obligation to comply with the direction

and oversight provided by Congress to manage our agency to the best of our abilities and within the letter of the law.

I have a very detailed understanding of what is involved in managing NOAA because I've done it before. I ran the agency from 2019 to 2021, through multiple annual budget cycles, spend plans, and disaster supplemental appropriations, some of which spanned the pandemic.

Running a large agency with a public service mandate of protecting life and property during a pandemic was not something anyone could have been fully prepared to do. Under my leadership, NOAA rapidly changed and adapted operational protocols and accelerated onboarding of new technologies like cloud data access, virtual environments for daily meetings, and autonomous vehicles for acoustic fish surveys. Apart from a few bottom trawl surveys, NOAA successfully executed all of its mission essential functions, including producing the some of the most accurate hurricane forecast tracks on record for the most active Atlantic season on record (2020: 30 named storms) with the most landfalls on record (2020: 11 U.S. landfalls), while simultaneously doing a stellar job of fire weather forecasting.

24. What do you believe to be the top three challenges facing the department/agency/commission/corporation, and why?

Weather Forecasting and Modeling -- Return NOAA NWS to the world's leader in global weather forecast modeling capability. The United States led the world in weather forecasting and modeling for decades, but has not kept pace with overseas competition, and is struggling to maintain the status of third most accurate global weather model among National Meteorological Services. As a matter of public safety, national security, and national pride, we will restore American technical superiority for this vital service for the country and our military serving around the world. As part of this effort, implementing a community-based earth-system modeling program is crucial. This will require adoption of cloud-based computational resources and artificial intelligence. While this is technically straightforward, it will require a significant culture shift in the workforce and proactive effort to migrate to cloud and align development efforts across a common code base. Rapid change management will always be a challenge in any large organization. The prediction of the future state of the atmosphere, ocean, and even the sun, requires accurate and timely observations for both initialization and verification. Whether these forecasts are physics based or AI or a hybrid of both, as the model space-time resolution increases, the need for better observations increases exponentially. Embracing new technologies, novel approaches, and partnerships with industry and the research community will be an integral part of addressing this challenge.

Reduce Seafood Supply Deficit -- The U.S. has an estimated $20 billion trade imbalance in seafood, much of it due to unfair trade practices, the importation of aquaculture seafood, and lack of domestic processing capacity and aquaculture production. The U.S. imports roughly $26 billion in seafood -- nearly half of which is produced via aquaculture and 30 percent is shrimp (farmed and wild-caught). To achieve changes to the deficit, NOAA should consider increasing wild-caught production, increasing aquaculture, and reducing imports from nations with weak environmental protections. Leveling the playing field will also require cracking down on illegal, unreported, and unregulated (IUU) fishing. Additionally, embracing new technologies and science-based approaches to stock assessments will benefit both the U.S. commercial fishing industry and recreational fishing community.

Asset management -- NOAA maintains hundreds of facilities across the nation, operates some of the largest observing networks in the world, and flies some of the most cutting-edge satellites in space. Over time, these assets will need to be replenished and recapitalized to continue providing Americans with the level of service they have come to rely on. These assets will continue to require careful planning, management, and oversight to ensure NOAA continues to meet its mission requirement.

B. POTENTIAL CONFLICTS OF INTEREST

1. Describe all financial arrangements, deferred compensation agreements, and other continuing dealings with business associates, clients, or customers. Please include information related to retirement accounts, such as a 401(k) or pension plan.

I have no financial arrangements, deferred compensation agreements, or other continuing dealings with business associates, clients, or customers. I do have an IRA and Roth.

2. Do you have any commitments or agreements, formal or informal, to maintain employment, affiliation, or practice with any business, association, or other organization during your appointment? If so, please explain.

No.

3. Indicate any investments, obligations, liabilities, or other relationships which could involve potential conflicts of interest in the position to which you have been nominated. Explain how you will resolve each potential conflict of interest.

In connection with the nomination process, I have consulted with the Office of Government Ethics and Department of Commerce agency ethics officials to identify any potential conflicts of interest. Any potential conflicts of interest will be resolved in accordance with the terms of my ethics agreement. I understand that my ethics agreement has been provided to the Committee. I am not aware of any potential conflict of interest other than those that are the subject of my ethics agreement.

4. Describe any business relationship, dealing, or financial transaction which you have had during the last ten years, whether for yourself, on behalf of a client, or acting as an agent, that could in any way constitute or result in a possible conflict of interest in the position to which you have been nominated. Explain how you will resolve each potential conflict of interest.

None.

5. Identify any other potential conflicts of interest and explain how you will resolve each potential conflict of interest.

Any potential conflicts of interest will be resolved in accordance with the terms of my ethics agreement. I understand that my ethics agreement has been provided to the Committee.

6. Describe any activity during the past ten years, including the names of clients represented, in which you have been engaged for the purpose of directly or indirectly influencing the passage, defeat, or modification of any legislation or affecting the administration and execution of law or public policy.

None.

C. LEGAL MATTERS

1. Have you ever been disciplined or cited for a breach of ethics, professional misconduct, or retaliation by, or been the subject of a complaint to, any court, administrative agency, the Office of Special Counsel, an Inspector General, professional association, disciplinary committee, or other professional group? If yes:
a. Provide the name of the court, agency, association, committee, or group;
b. Provide the date the citation, disciplinary action, complaint, or personnel action was issued or initiated;
c. Describe the citation, disciplinary action, complaint, or personnel action;
d. Provide the results of the citation, disciplinary action, complaint, or personnel action.

While not officially cited for breach of ethics, I encumbered the NOAA Administrator position during the September 6, 2019, incident and was one of several employees that were referred to the Inspector General. The conclusions of the IG report did not find me at fault for the incident, and I was not cited for any breach of ethics. The report concludes that while a better protocol for chain of command should have been followed, that the process for handling social media was not well established. It also concludes that I was one of only three parties who properly preserved records. In the end, I received no citation, and no disciplinary or personnel action was taken.
https://www.oig.doc.gov/OIGPublications/OIG-20-032-I.pdf

2. Have you ever been investigated, arrested, charged, or held by any Federal, State, or other law enforcement authority of any Federal, State, county, municipal, or foreign government entity, other than for a minor traffic offense? If so, please explain.

No.

3. Have you or any business or nonprofit of which you are or were an officer ever been involved as a party in an administrative agency proceeding, criminal proceeding, or civil litigation? If so, please explain.

No.

4. Have you ever been convicted (including pleas of guilty or *nolo contendere*) of any criminal violation other than a minor traffic offense? If so, please explain.

No.

5. Have you ever been accused, formally or informally, of sexual assault, sexual harassment, or discrimination on the basis of sex, race, religion, or any other basis? If so, please explain.

No.

6. Please advise the Committee of any additional information, favorable or unfavorable, which you feel should be disclosed in connection with your nomination.

None.

D. RELATIONSHIP WITH COMMITTEE

1. Will you ensure that your department/agency/commission/corporation complies with deadlines for information set by congressional committees, and that your department/agency/commission/corporation endeavors to timely comply with requests for information from individual Members of Congress, including requests from members in the minority?

Yes.

2. Will you ensure that your department/agency/commission/corporation does whatever it can to protect congressional witnesses and whistleblowers from reprisal for their testimony and disclosures?

Yes.

3. Will you cooperate in providing the Committee with requested witnesses, including technical experts and career employees, with firsthand knowledge of matters of interest to the Committee?

Yes.

4. Are you willing to appear and testify before any duly constituted committee of the Congress on such occasions as you may be reasonably requested to do so?

Yes.

F. AFFIDAVIT

Neil Jacobs being duly sworn, hereby states that he/she has read and signed the foregoing Statement on Biographical and Financial Information and that the information provided therein is, to the best of his/her knowledge, current, accurate, and complete.

Signature of Nominee

Subscribed and sworn before me this 16 day of May 2025

Notary Public

SHIRL L. DESORMEAUX
NOTARY PUBLIC DISTRICT OF COLUMBIA
My Commission Expires February 28, 2027

SHIRL L. DESORMEAUX NOTARY PUBLIC EXP. 2-28-27 DISTRICT OF COLUMBIA

NEIL ANDREW JACOBS

[redacted] [redacted]

AREAS OF EXPERTISE

Economic and environmental policy; strategic innovation for early- and growth-stage startups and public-private partnerships; quantitative computer-driven trading models for weather-sensitive commodities; numerical weather prediction; probabilistic risk mitigation; data assimilation methods; satellite, aircraft and in-situ observing systems; marine ecology; fisheries management; artificial intelligence, machine learning; cloud-based high-performance computing, data management and optimization.

EMPLOYMENT

2022-present, Chief Science Advisor, Cooperative Programs for the Advancement of Earth System Science (CPAESS), University Corporation for Atmospheric Research (UCAR). Oversee development, governance, and community engagement for the Unified Forecast System (UFS).

2022-present, Senior Executive Advisor, Booz Allen Hamilton. Business development, government relations, and innovative strategic solutions for civil, defense, space, and intelligence.

2021-present, Managing Director, AxioScientia, LLC. Strategic business development and consulting for early- and growth-stage startups in areas related to science and technology.

2019-21, Under Secretary of Commerce for Oceans and Atmosphere (Acting), National Oceanic and Atmospheric Administration. Responsible for the strategic direction and oversight of over $6 billion in annual spending, including key investments in community Earth system model development, space innovation, autonomous systems, and unlocking partnership potential of non-governmental organizations and private industry to study the atmosphere, oceans, and promote a blue economy.

2018-21, Assistant Secretary of Commerce for Environmental Observation and Prediction, Responsible for the strategic innovation and private sector engagement to improve U.S. weather forecast models, satellite data, and the commercial weather enterprise.

2013-18, Chief Scientist, Panasonic Avionics Corporation. Managed the business development and deployment of weather-related data and products. Directed the development of global forecast products and advanced high-resolution data assimilation to enable better decision-making by industry, commercial aviation, and international and domestic governmental agencies.

2004-13, Director of Research and Trading, AirDat, LLC. Oversee the development of new products and high-resolution forecasts for use in quantitative trading models for weather-sensitive commodities. Part of team that formed initial startup company.

2000-06, Research Scientist, North Carolina State University: Research involved atmospheric modeling (WRF) of surface temperature grid resolution to account for frontogenesis and sensible heat fluxes into the atmosphere over the southeast US and coastal waters. Gulf Stream thermal gradient structure influence on rapid extratropical cyclogenesis.

1998, Co-Developer, Computer modules for NASA's Earth System Science Program. NASA Goddard.

1997, Programmer and GOES Satellite imagery processor, NASA Langley.

1995-97, Physical Limnology of Winyah Bay: Analysis and modeling of salinity, temperature, and current. U. of South Carolina.

1993-97, Systems Engineer, Oak Ridge National Lab, Nuclear Physics Branch, TN. Joint with College of Charleston and U. of South Carolina.

1991-present, Inshore Fly Fishing Guide. Charleston, SC and Miami, FL.

1991-96, Marine Electronics Technician. Charleston, SC.

SECURITY CLEARANCE: TS/SCI (active)

EDUCATION

Ph.D. in Atmospheric Science (Numerical Weather Prediction), May 2005, North Carolina State University
Thesis: The Role of Marine Thermal Gradient Structure on Gulf Stream-Related Extratropical Cyclogenesis. (Thesis Advisors: **Dr. Sethu Raman** and **Dr. Gary M. Lackmann**; Committee Members: Dr. Ping-Tung Shaw, Kermit K. Keeter, and Dr. Kiran Alapaty).

M.S. in Air-Sea Interaction, May 2000, North Carolina State University
Thesis: Physical Oceanographic Processes and Air-Sea Interactions Associated with Extratropical Cyclogenesis During the Ocean Margins Program. (Thesis Advisor: **Dr. Leonard J. Pietrafesa**; Committee: Dr. Lian Xie, Dr. Sethu Raman, and Dr. John M. Morrison).

B.S. in Physics, May 1996, University of South Carolina

B.S. in Mathematics, May 1996, University of South Carolina
Minor in Economics, Computer Science, Marine Science

CONGRESSIONAL TESTIMONY

Hearing: Winning in Weather: U.S. Competitiveness in Forecasting and Modeling (6 March 2024)
House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Environment

Hearing: National Oceanic and Atmospheric Administration Organic Act (18 April 2023)
House of Representatives, Committee on Science, Space, and Technology, Full Committee

Senate Confirmation: Under Secretary of Commerce for Oceans and Atmosphere (11 March 2020); nominated by President Trump
United States Senate, Subcommittee on Commerce, Justice, Science and Related Agencies

Hearing: Examining Opportunities to Improve Prevention and Response of SASH at NOAA (27 February 2020)
House of Representatives, Committee on Natural Resources, Subcommittee on Oversight and Investigations

Hearing: A Task of EPIC Proportions: Reclaiming U.S. Leadership in Weather Modeling and Prediction (20 November 2019)
House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Environment

Hearing: The Future of Forecasting: Building a Stronger U.S. Weather Enterprise (16 May 2019)
House of Representatives, Committee on Science, Space, and Technology, Subcommittee on the Environment

Hearing: A Review of the NOAA Fiscal Year 2020 Budget Request (30 April 2019)
House of Representatives, Committee on Science, Space, and Technology, Subcommittee on the Environment

Hearing: Review of the FY2020 Budget Request for the U.S. Department of Commerce (2 April 2019)
United States Senate, Committee on Appropriations, Subcommittee on Commerce, Justice, Science and Related Agencies

Hearing: The National Oceanic and Atmospheric Administration's Budget Request for Fiscal Year 2020 (27 March 2019)
House of Representatives, Committee on Appropriations, Subcommittee on Commerce, Justice, Science, and Related Agencies
Hearing: Understanding the Changing Climate System and the Role of Climate Research (26 February 2019
House of Representatives, Committee on Appropriations, Subcommittee on Commerce, Justice, Science, and Related Agencies
Hearing: Surveying the Space Weather Landscape (26 April 2018)
House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Space
Senate Confirmation: Assistant Secretary of Commerce for Observation and Prediction (1 November 2017); nominated by President Trump
United States Senate, Subcommittee on Commerce, Justice, Science and Related Agencies
Hearing: Leading the Way: Examining Advances in Environmental Technology (21 June 2017)
House of Representatives, Committee on Science, Space, and Technology, Subcommittee on Environment
Hearing: Private Sector Weather Forecasting: Assessing Products and Technologies (8 June 2016)
House of Representatives, Committee on Science, Space, and Technology. Subcommittee on Environment
Many additional statements co-prepared for Hearing witnesses

COMMUNITY ENGAGEMENT

Fellow, American Meteorological Society
American Meteorological Society's Kenneth C. Spengler Award recipient (2023)
National Fish and Wildlife Foundation (NFWF; Board member 2019-21)
World Meteorological Organization (WMO; U.S. Delegation 2016-present; Head of U.S. Delegation 2018-21)
U.S. Group on Earth Observations (USGEO; Head of U.S. Delegation 2018-21)
Advisory Committee on Commercial Remote Sensing (ACCRES; Chair 2018-21)
Interagency Council on Advancing Meteorological Services (White House NSTC/OSTP; Co-chair 2018-21)
Group on Earth Observations (GEO; Executive Committee Co-chair 2018-21)
American Meteorological Society (AMS) Forecast Improvement Group (Chair 2015-2018)
World Meteorological Organization (WMO) Expert Team on Aircraft-Based Observing Systems (ET-ABO)

PROFESSIONAL ORGANIZATIONS

American Geophysical Union
American Meteorological Society
National Forensics League
National Weather Association
Phi Beta Kappa, Honor Society
Sigma Xi

COURSES TAUGHT

2007-11, (NCSU): Thermodynamics (MEA 312)
2003-07, (Meredith): Meteorology, Intro to GIS (GEO 942, 943)
2000-01, (NCSU): Meteorology I, II (MEA 213, 214)
1998-99, (NCSU): Oceanography and Lab (MEA 200, 210L)
1997-04, (NCSU): Earth System Science (MEA 100)
1993-97, (UofSC): Calculus-based physics (PHYS 101, 102, 211

COMPUTER SKILLS

Programming Languages: Fortran, C, C++, C#, Perl, R, Python, Java.
Computing Environments: AWS, Azure, EC2, Linux, AIX, Mac, OpenMPI, Spark, Slurm, FreeBSD, Darwin.
Software/Models including: GFS(FV3), JEDI, GSI, MPAS, WRFDA, WW3, MOM6, GrADS, NCL, IDV, ArcGIS, MATLAB, ecFlow, Git.

PUBLICATIONS/PREPRINTS

Jacobs, N., J. Churchill, L. J. Pietrafesa, S. Bao, and P. T. Gayes, 2023: Ocean-Atmosphere Interactions during the Passage of an Extratropical Cyclone in the Vicinity of Cape Hatteras, North Carolina, *Intl. J. of Geosciences*, **14**, 855-876.

Brotzge, J., D. Berchoff, D. Carlis, F. Carr, R. Carr, J. Gerth, B. Gross, T. Hamill, S. E. Haupt, **N. Jacobs**, A. McGovern, D. Stensrud, G. Szatkowski, I. Szunyogh, and X. Wang, 2023: Challenges and Opportunities in Numerical Weather Prediction. *Bull. Amer. Meteor. Soc.*, **104**, 698–705.

Jacobs, N. A., 2021: Open Innovation and the Case for Community Model Development. *Bull. Amer. Meteor. Soc.*, **102(10)**, 2002-2022.

Droegemeier, K., and **N. Jacobs**, 2021: Restructuring of U.S. Federal Coordination to Advance Meteorological Services. *Bull. Amer. Meteor. Soc.*, **103(2)**, 230-247.

Gao, F., Z. Liu, J. Ma, **N. Jacobs**, P. Childs, and H. Wang, 2019: Variational Bias Correction of TAMDAR Temperature Observations in WRF Data Assimilation System. *Mon. Wea. Rev.*, **147**, 1927-1945.

Gao, F., X.-Y. Huang, **N. Jacobs**, and H. Wang, 2018: Assimilation of Wind Speed and Direction Observations: Results from real observation experiments. *Tellus A*, **67**,1.

Zhang, X., H. Wang, X.-Y. Huang, F. Gao, and **N. Jacobs**, 2015: Using Adjoint-Based Forecast Sensitivity Method to Evaluate TAMDAR Data Impacts on Regional Forecasts. *Advances in Meteorology*, Vol. 2015, Article ID 427616, 13.

Jacobs, N., D. Mulally, A. Anderson, J. Braid, P. Childs, A. Huffman, E. Wilson, and F. Gao, 2015: Recent Advancements in the TAMDAR Sensor Network Expansion, (IOAS-AOLS), AMS.

Jacobs, N.., F. Gao, P. Childs, X. Y. Huang, and H. Wang, 2015: Optimization of In-situ Aircraft Observations for Various Assimilation Techniques, (IOAS-AOLS), AMS.

Liu, Y., M. Xu, L. Pan, Y. Liu, **N. Jacobs**, and P. Childs, 2015: Implementation of a CONUS RTFDDA system with radar data assimilation for convection-resolvable analysis and prediction, (IOAS-AOLS), AMS.

Gao, F., P. P. Childs, X.-Y. Huang, **N. A. Jacobs**, and J. Z. Min, 2014: A Relocation-based Initialization Scheme to Improve Track-forecasting of Tropical Cyclones. *Adv. Atmos. Sci.*, **31**(1), 27-36.

Jacobs, N. A., D. J. Mulally, and A. K. Anderson, 2014: Correction of Flux Valve–Based Heading for Improvement of Aircraft Wind Observations. *J. Atmos. Oceanic Technol.*, **31**, 1733–1747.

Jacobs, N. A., and J. E. Rex, 2013: Benefits and Utility of Tropospheric Airborne Meteorological Data Reporting, *Air Traffic Control Quarterly*, January, First Quarter, 2013.

Huang, X.-Y., F. Gao, **N. A. Jacobs**, and H. Wang, 2013: Assimilation of wind speed and direction observations: a new formulation and results from idealized experiments. *Tellus A*, **65**, 19936.

Wyszogrodzki, A. A., Y. Liu, **N. A. Jacobs**, P. Childs, Y. Zhang, G. Roux, and T. T. Warner, 2013: Analysis of the surface temperature and wind forecast bias of the NCAR-AirDat operational CONUS 4km RTFDDA forecasting system, *Meteorol. Atmos. Phys.* , **121**, 3-4.

Jacobs, N. A., P. Childs, M. Croke, A. Huffman, J. Nelson, J. T. Braid, Y. L. Liu, and X. Y. Huang, 2013: An update on the TAMDAR global network expansion, Special Symposium on Advancing Weather and Climate Forecasts: Innovative Techniques and Applications, Austin, TX.

Nelson, J., J. T. Braid, A. K. Anderson, **N. A. Jacobs**, P. Childs, M. Croke, and A. Huffman, 2013: Alaska TAMDAR and the RTFDDA WRF QC System, ARAM, AMS, Austin, TX.

Huffman, A., P. Childs, M. Croke, **N. A. Jacobs**, and Y. L. Liu, 2013: Verification of the NCAR-AirDat operational RT-FDDA-WRF for the 2011 and 2012 spring convective seasons, IOAS, AMS, Austin, TX.

Gao, F., **N. A. Jacobs**, X. Y. Huang, and P. Childs, 2013: Direct assimilation of wind speed and direction for the WRF model, Special Symposium on Advancing Weather and Climate Forecasts: Innovative Techniques and Applications, AMS, Austin, TX.

Richardson, H., **N. A. Jacobs**, P. Childs, P. Marinello, and X. Y. Huang, 2013: UAS observations and their impact on NWP during TUFT, ARAM, AMS, Austin, TX.

Gao, F., P. Childs, X. Y. Huang, and **N. A. Jacobs**, 2013: A new method for vortex relocation within balanced flow field, NWP, Austin, TX.

Gao, F., X. Zhang, **N. Jacobs**, X.-Y. Huang, Xin Zhang, P. Childs, 2012. Estimation of TAMDAR Observational Error and Assimilation Experiments. *Wea. Forecasting*, **27**, 4, 856-877.

Zhang, Y. Y. Liu, **N. A. Jacobs**, P. Childs, T. Nipen, T. T. Warner, L. D. Monache, G. Roux, A. Wyszogrodzki, W. Y. Y. Cheng, W. Yu, and R.- S. Sheu, 2012: Evaluation of the impact of assimilating the TAMDAR data on WRF-based RTFDDA simulations and the RTFDDA performance on predicting warm-season precipitation over the CONUS, *Wea. Forecasting*, under revision.

Gao, F., X.-Y. Huang, **N. Jacobs**, 2012: The Assimilation of Wind Speed and Direction Based on WRFDA 3D-Var System, New Orleans, LA.

Zhang, Xiaoyan, X.-Y. Huang, T. Auligne, Xin Zhang, F. Gao, **N. Jacobs**, P. Childs. 2012. Evaluation of TAMDAR Data Impact on Forecast Error with WRFDA-FSO System, AMS, New Orleans, LA.

Gao, F., Xiaoyan Zhang, X.-Y. Huang, Xin Zhang, **N. Jacobs**, P. Childs, 2011: Preliminary Results of Directly Assimilating Wind Speed and Direction Based on WRFDA 3D-Var System. 12th WRF Users' Workshop, Boulder, Colorado, 20-24 June 2011.

Liu, Y., T. Warner, S. Swerdlin, T. Betancourt, J. Knievel, B. Mahoney, J. Pace, D. Rostkier-Edelstein, **N. A. Jacobs**, P. Childs, and K. Parks, 2011: NCAR ensemble RTFDDA: real-time operational forecasting applications and new data assimilation developments. 24th Conference on Weather and Forecasting (WAF-NWP), AMS, Seattle, WA.

Huffman, A., **N. A. Jacobs**, M. Croke, P. Childs, X. Y. Huang, and Y. Liu, 2011: Verification and Sensitivity of the NCAR-AirDat Operational Forecasting Systems to TAMDAR Observations. 15th Symposium (IOAS-AOLS), AMS, Seattle, WA.

Jacobs, N. A., F. Gao, P. Childs, X. Zhang, X. Y. Huang, X. Zhang, M. Croke, and Y. Liu, 2011: Optimization of In-situ Aircraft Observations for Various Assimilation Techniques. 15th Symposium (IOAS-AOLS), AMS, Seattle, WA.

Jacobs, N. A., M. Croke, P. Childs, Y. Liu, X. Y. Huang, and R. DeJong, 2011: The Utility of TAMDAR in the NextGen-Oriented CLEEN Program. Second Aviation, Range and Aerospace Meteorology Special Symposium on Weather-Air Traffic Management (ARAM), AMS, Seattle, WA.

Croke, M., **N. A. Jacobs**, D. J. Mulally, A. K. Anderson, J. T. Braid, P. Childs, A. Huffman, Y. Liu, and X. Y. Huang, 2011: Recent Advancements in the TAMDAR Sensor Network Expansion. 15th Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans and Land Surface (IOAS-AOLS), AMS, Seattle, WA.

Jacobs, N. A., P. Childs, M. Croke, Y. Liu, and X. Y. Huang, 2010: An Update on the TAMDAR Sensor Network Deployment, (IOAS¬AOLS), GA.

Jacobs, N. A., M. Croke, P. Childs, and Y. Liu, 2010: The Potential Utility of TAMDAR Data in Air Quality Forecasting, (IOAS), Atlanta, GA.

Childs, P., **N. A. Jacobs**, M. Croke, Y. Liu, W. Wu, G. Roux, and M. Ge, 2010: An Introduction to the NCAR-AirDat Operational TAMDAR-Enhanced RTFDDA-WRF, (IOAS-AOLS), AMS, Atlanta, GA.

Croke, M., **N. Jacobs**, P. Childs, and Y. Liu, 2009: The Utility of TAMDAR on Short-Range Forecasts over Alaska, (IOAS), AMS.

Jacobs, N., P. Childs, M. Croke, Y. Liu, and X. Y. Huang, 2009: The Optimization Between TAMDAR Data Assimilation Methods and Model Configuration in WRF-ARW, (IOAS-AOLS), AMS.

Childs, P., **N. Jacobs**, M. Croke, Y. Liu, and X. Y. Huang, 2009: TAMDAR- Related Impacts on the AirDat Operational WRF-ARW as a Function of Data Assimilation Techniques, (IOAS-AOLS), AMS.

Jacobs, N., P. Childs, M. Croke, and Y. Liu, 2008: The Effects of Horizontal Grid Spacing and Vertical Resolution on TAMDAR Data assimilation in Short-Range Mesoscale Forecasts, AMS Annual Meeting, 12th Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS).

Jacobs, N. A., S. Raman, G. M. Lackmann, and P. P. Childs, Jr, 2007: The influence of the Gulf Stream induced SST gradients on the US East Coast winter storm of 24-25 January 2000. *International Journal of Remote Se*nsing, **29**, 6145-6174.

Jacobs, N. A., 2007: Potential benefits of tropospheric airborne meteorological data reporting (TAMDAR). *Managing the Skies*, 5, 3, 20-23.

Liu, Y., T. Warner, S. Swerdlin, W. Yu, **N. Jacobs**, and M. Anderson, 2007: Assimilation data from diverse sources for mesoscale NWP: TAMDAR-data impact. *Geophysical Research Abstracts*, **9**, EGU2007-A-03109.

Liu, Y., **N. A. Jacobs**, W. Yu, T. T. Warner, S. P. Swerdlin, and M. Anderson, 2007: An OSSE study of TAMDAR data impact on mesoscale data assimilation and prediction, AMS Annual Meeting, 11th Symposium on (IOAS-AOLS) 5.20.

Jacobs, N. A., 2006: The effects of lower-tropospheric data resolution on short-range mesoscale model forecasts of surface temperatures during the summer season, Doc. and Tech. Note AirDat, LLC, 53 pp.

Jacobs, N. A., and Y. Liu, 2006: A comprehensive quantitative precipitation forecast statistical verification study, Doc. and Tech. AirDat 25 pp.

Jacobs, N. A., Y. Liu, and C.-M. Druse, 2006: Evaluation of temporal and spatial distribution of TAMDAR data in short-range mesoscale forecasts, AMS Annual Meeting, 10th Symp. IOAS-AOLS.

Jacobs, N. A., S. Raman, and G. M. Lackmann, 2006: Sensitivity of East Coast winter storms to sea surface temperature gradients, AMS Annual Meeting, 14th Conf. Sea-Atmos.

Jacobs, N. A., G. M. Lackmann and S. Raman 2005: The combined effects of Gulf Stream–induced baroclinicity and upper-level vorticity on U.S. East Coast extratropical cyclogenesis. *Mon. Wea. Rev.*, **133**, 2494–2501.

Jacobs, N. A., 2004: Porting MM5 to OS X: A guide to mesoscale modeling on a G5, *Mac OSX Hints*, **15**, 97.

Jacobs, N., 2004: The Role of Marine Thermal Gradient Structure on Gulf Stream-Related Extratropical Cyclogenesis, Ph.D. Dissertation, Department of Marine, Earth, and Atmospheric Science, North Carolina State University, Raleigh, NC. 307pp.

Jacobs, N. A., S. Raman, G. M. Lackmann, and P. P. Childs, Jr, 2004: Role of the Gulf Stream on extratropical cyclogenesis, AMS Annual Meeting, 20th Conf. WAF/NWP pp. 318-322.

Raman, S., **N. Jacobs**, and M. Simpson, 2003: Numerical simulation of land-air-sea interactions during the northeasterly monsoon over Indian Ocean. INDOEX conf. Bangalore, India.

Jacobs, N. A., 2001: Latent and sensible heat fluxes over the Gulf Stream region during OMP. AGU, Boston, MA. Preprint pp 412-417.

Jacobs, N., 2000: Physical Oceanographic Processes and Air-Sea Interactions of extratropical cyclogenesis during the Oceans Margins Program, Thesis, Department of Marine, Earth, and Atmospheric Science, North Carolina State University, Raleigh, NC. 178pp.

Jacobs, N., C. Petrusak, V. Connors, D. DeMaster, T. Hopkins, 1998: Earth System Science: Integration of Computer Modeling and Laboratory Studies. 25 conf GSA/ESSE, pp. 127-131.

Jacobs, N., V. Connors, T. Hopkins, D. DeMaster, W. Sweet, 1998: The Evolution of Earth System Science at North Carolina State University. 25 conf GSA/ESSE, pp. 417-421.

1996-present, Collegiate policy (cx) debate (coaching, brief-writing, strategy), Baylor, Stanford, Dartmouth, and UofSC.

Commercial Driver License NC: Class B (GVWR 26,001lbs or more)

Personal interests: saltwater fly fishing, surfing, cycling, climbing, backpacking, stony coral propagation, and native orchid conservation.

Addendum to the questionnaire submitted to the Senate Committee on Commerce, Science, and Transportation, 119th Congress by Neil Jacobs.

Upon further review, I have identified additional pieces of information that are responsive to questions A.8, 11, 12, 15, 17, and 18 on the Committee's questionnaire. They are:

- **A.8 -** Mr. Jacobs resume indicates he was the Acting Undersecretary of Commerce for Oceans and Atmosphere from 2019-2021, but it is not disclosed in his questionnaire. There are multiple other positions that Mr. Jacobs listed on his resume that appear responsive to this request but also not disclosed in his questionnaire. Please clarify and provide a supplement as appropriate.

    - **Clarification**: From 2019 to 2021, while I was officially employed as the Assistant Secretary of Commerce for Environmental Observation and Prediction, I was also performing the duties of Under Secretary of Commerce for Oceans and Atmosphere. I was not sworn in to this role, nor did my salary or compensation reflect this role. It was in addition to my official role (i.e., Acting). The other positions prior to 2004 were part of graduate student research and various assistantships that were ether non-managerial or unrelated to the role for which I was nominated.

- **A.11 -** Please indicate what positions Mr. Jacobs held with FAA Continuous Lower Emissions, Energy, and Noise, and the World Meteorological Organization Expert Team on Aircraft-based Observing Systems, as requested.

    - **Clarification**: For the Federal Aviation Administration Continuous Lower Emissions, Energy, and Noise Program and the World Meteorological Organization Expert Team on Aircraft-Based Observing Systems, I was considered one of many on a team of technical experts. While the roles had no specific titles, I supposed my position would be referred to as a "technical expert".

- **A.12 -** Mr. Jacobs did not list any dates or positions held with the organizations listed, as requested (except for Sigma Pi Sigma). Additionally, there are multiple memberships and organizations listed on Mr. Jacobs resume that are not disclosed in his questionnaire. Please specify the dates of Mr. Jacobs's membership and the positions he held with these organizations, and supplement with additional responsive materials as appropriate.

    - **Clarification**: Other than the one specified, I did not hold any specific position in those organizations other than general membership. I don't have specific dates of membership, but the approximate dates, to the best of my knowledge, are listed below, which include some intermittent lapses in membership/dues. American Meteorological Society: approximately 1995 to present; (Fellow 2025); National Weather Association: approximately/intermittently 2020 to present; WMO ABO-ET: approximately 2014 to 2016; American Geophysical Union, Geological

Society of America: approximately 1995 to 2004; National Forensics League: approximately 1989 to 1998; Sigma Pi Sigma, National Physics Honor Society (President: 1993-1996, USC Chapter), Sigma Xi, Honor Society, Gamma Beta Phi, Phi Beta Kappa, Pi Mu Epsilon: approximately 1992 to 1998; Rotary International: approximately 1992 to 1996; Durham YMCA, Trout Unlimited, and Greensboro Velo Club: approximately/intermittently: 1996 to 2015

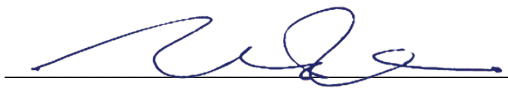
- **A.15 -** We have identified political contributions that appear to be from Mr. Jacobs and not disclosed. See below. Please conduct a thorough search and provide a supplement as appropriate. Donald J. Trump for President, 9/29/20 - $500 (questionnaire discloses a contribution in this amount/date only to “Trump Victory”) Donald J. Trump for President, 3/30/20 - $520 Trump Victory, 3/30/20 - $520 Donald J. Trump for President, 2/27/20 - $520 (questionnaire discloses a contribution in this amount/date only to “Trump Victory”)

    - **Clarification**: According to the FEC, the following donations were made though WinRed website to the joint fundraising committee listed as "Trump Victory": 02/27/20 - $520.10, 03/03/20 -$520.10, 09/29/20 - $499.00. The FEC website lists both Donald J. Trump for President, Inc. and Trump Victory with the exact same amounts because it is the same contribution. This is denoted by the "year to date" column on the FEC website.

- **A.17** and **A.18 -** Please provide a link to or digital copy of each item listed as requested. If neither exists, please specify for each.

    - **Clarification**: I have compiled a directory of digital copies of papers, power points, and seminars I have given or written. The volume and file sizes far exceed what I can electronically transmit, so I plan to provide the committee with external drives.

The undersigned certifies that the information contained in the public addendum is true and correct.

Signed  Date: May 28, 2025