

# Space Weather Advisory Group

September 26, 2024

**TO:** Co-Chairs, White House Space Weather Operations, Research, and Mitigation (SWORM) Subcommittee:

Dr. Jennifer Meehan,  
Assistant Director for Space Policy, Office of Science and Technology Policy

Mr. Kenneth Graham,  
Assistant Administrator for Weather Services, NOAA, and Director, National Weather Service

Ms. Mona Harrington,  
Assistant Director, National Risk Management Center, CISA, DHS

**SUBJECT: Transmittal of the Space Weather Advisory Group's report *Results of the First National Survey of User Needs for Space Weather***

Dear SWORM Co-Chairs:

On behalf of the Space Weather Advisory Group (SWAG), I am pleased to transmit to you the report *Results of the First National Survey of User Needs for Space Weather*. In October 2020, Congress passed the Promoting Research and Observations of Space Weather to Improve the Forecasting of Tomorrow (PROSWIFT) Act (PROSWIFT; P.L. 116-181; 51 USC 60601-60608). PROSWIFT directs NOAA, working with SWORM, to establish SWAG. PROSWIFT tasked SWAG to, among other things, "conduct a comprehensive survey of the needs of users of space weather products to identify the space weather research, observations, forecasting, prediction, and modeling advances required to improve space weather products."

In conducting the user needs survey, SWAG built on the work presented in [Findings and Recommendations to Successfully Implement PROSWIFT and Transform the National Space Weather Enterprise \(SWAG, 2023\)](#) and [Customer Needs and Requirements for Space Weather Products and Services \(Abt Survey Report, 2019\)](#), and in accordance with the survey considerations provisions outlined in the PROSWIFT Act [51 USC 60601(d)(3)(B)].

The space weather end-user community is diverse and can be categorized in a variety of ways. SWAG divided the community into 10 industry sectors. In 2023, SWAG decided to conduct the user needs survey on 7 of the 10 sectors: electric power, aviation, human space flight (HSF),

space traffic management and coordination (STM/C), emergency management (EM), research, and applications and users of global navigation satellite systems (GNSSs). The sectors identified and interviewed play important roles in national security, the economy, and society. SWAG developed a common set of questions that could be asked across all sectors and sets of sector-specific questions. For most sectors, focus groups were used to collect the survey information. The GNSS sector is large and diverse, and thus the information will be collected over 2 or more years via an online survey followed by focus groups. The GNSS sector survey is ongoing and results are not presented in the attached report.

SWAG surveyed over 200 individuals (virtually and in person) across 6 sectors, resulting in a total of 46 findings and 113 recommendations. In compiling this report, SWAG recognized common themes that arose across multiple sectors. These common themes with summarized findings and recommendations are detailed in the final chapter of the report—Overarching Themes and Next Steps—and present an opportunity for common investment and consolidated action to address multiple recommendations across several sectors and are summarized below.

SWAG looks forward to engaging SWORM agencies and other relevant stakeholders on these findings and recommendations. To that end, SWAG requests that NOAA transmit this report to the appropriate congressional staff. SWAG looks forward to future engagement with SWORM and Congress on this report, as well as opportunities to monitor and assess SWORM's implementation progress.

Very Respectfully,



Dr. Tamara Dickinson  
SWAG Chair

Cc: SWORM Subcommittee  
Rick Spinrad  
Karen Hyun  
Michael Weiss  
Amy MacPherson

Attachment: *Results of the First National Survey of User Needs for Space Weather*