



February 27, 2023

Dr. Richard DalBello  
Director, Office of Space Commerce  
National Oceanic and Atmospheric Administration  
1401 Constitution Avenue NW, Room 5128  
Washington, DC 20230

*RE: Request for Information on Scope of Civil Space Situational Awareness Services (Document Number: 2023-01556)*

Dear Dr. DalBello:

As the leading national trade association for the commercial space industry, with nearly 100 member companies and organizations across the United States that together represent the majority of private space activity in the world, the Commercial Spaceflight Federation (CSF) respectfully submits the enclosed input in response to the *Request for Information on Scope of Civil Space Situational Awareness Services (Document Number: 2023-01556)*. Thank you for the opportunity to respond to this Request for Information.

CSF applauds the Department of Commerce and the Office of Space Commerce (OSC) for recognizing the need for reliable and comprehensive space situational awareness (SSA) and space traffic coordination solutions through the establishment of the Traffic Management System for Space (TraCSS). CSF supports OSC as the lead Federal agency overseeing orbital debris standards and requirements, and the planned basic safety services provided through the TraCSS program are critically important for space safety and the long-term sustainability of the space environment.

The TraCSS program should provide basic safety SSA services to the space community without cost to the end user, allowing spacecraft operators, commercial SSA analytics providers, and the research and academic communities to apply their own conjunction assessment tools, further refine conjunction alerts and associated methodologies, and develop risk mitigation strategies. To the greatest extent possible, OSC should prioritize purchasing data, analytics, information, and services from commercial SSA providers while ensuring licensing agreements with such firms enable them to continue market growth.

For advanced services, OSC should avoid competition with the domestic commercial services sector. Competition in the SSA market will benefit the U.S. Government (USG), operators, and providers, drive innovative solutions, advance technologies around analytics, and result in cost-



efficiencies, enabling U.S. leadership in this regard. Market growth for commercial SSA solutions should be a key priority for the Department (per Space Policy Directive-3 Goal 4c).

CSF recommends that the following be included in the provision of basic safety services via the TraCSS program:

1. Collision Avoidance screening for launches;
2. Cataloging of objects after launch;
3. Providing two-line element (TLE) sets or equivalent for all objects;
4. Operational Collision Avoidance screening *at least* one to three times per day with low latency (under one hour);
5. Operational Collision Avoidance screening using satellite owner/operator ephemerides with the same conditions under item (3); and
6. Special Collision Avoidance screening of satellite owner/operator ephemerides for planned maneuvers.

The TraCSS program must include a capability for rapidly screening ephemerides, both for other ephemerides and for cataloged objects. TraCSS should holistically provide, to the greatest practical extent, accurate and timely positional knowledge suitable for generating actionable flight safety products for all space objects.

As part of the basic services offered through TraCSS, OSC should maintain a complete public catalogue of SSA data and information and facilitate the development and adoption of voluntary industry consensus standards to ensure consistency and standardization in data provided. CSF recommends that OSC work with satellite owners and operators, as well as commercial service providers, the academic community, and non-profits in establishing data standardization and best practices. OSC should also consider incentivizing commercial operators and SSA providers to provide data, analytics, information, and services.

Spacecraft owners/operators, whether U.S.-authorized or foreign-authorized systems licensed to provide services in the U.S. market, should provide information about the past, current, and future location of their spacecraft or satellites. Transparency from satellite owners and operators—whether commercial or Government, U.S. or foreign—is critical for space safety and sustainability.

To facilitate consistency, OSC should consider establishing standards for all operators and SSA data, analytics, information, and service providers and products to meet, including standards regarding ephemerides and covariance data and propagation models and tools. Satellite operators licensed by the U.S. and foreign-authorized satellite systems licensed to provide service in the U.S. should be encouraged to routinely upload standard satellite location and predicted location information to the Government. And, OSC should work to encourage USG



and foreign government operators, including China, to participate in a similar data sharing regime with respect to their assets in orbit.

In addition, the process for clearing launches should be centralized and made as efficient as possible while reducing the manual inputs required for approving each launch. Doing so will allow for an increased launch cadence while improving flight safety and sustainability.

CSF commends OSC for seeking public comment on the scoping of the basic safety services to be provided via TraCSS, and we appreciate the opportunity to provide these comments. CSF looks forward to continuing to work with OSC on this and other issues.

Sincerely,

A handwritten signature in black ink that reads "Karina Drees".

Karina Drees  
President  
Commercial Spaceflight Federation