Ed Saade, Chair
Julie Thomas, Vice-Chair
October 26, 2020

Dr. Neil Jacobs
Acting Under Secretary of Commerce for Oceans and Atmosphere
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, D.C. 20230

Dear Dr. Jacobs,

It was an honor to have you speak at the September 2020 Hydrographic Services Review Panel (HSRP) meeting. Your comments framed the focus of the Panel members on National Ocean Service's (NOS) navigation services and mission. The discussions between National Oceanic and Atmospheric Administration (NOAA) leadership and HSRP members were truly informative and included substantive comments from the public attendees on the two mapping strategies.

The HSRP members appreciate your comments regarding both NOAA's Big Data Program as well as your interest in the benefits of attaining more frequent and updated high-resolution nearshore bathymetry. The partnerships that NOAA has developed on Big Data makes the high-quality environmental data available that will benefit all sectors of society.

The meeting focused on the ocean and coastal mapping strategies for the National Strategy for Mapping, Exploring and Charactering the U.S. Exclusive Economic Zone (EEZ) - NOMEC - and the Alaska Coastal Mapping Strategy - ACMS. The ocean mapping strategies and Presidential Directive steered NOAA towards mission goals related to protecting future prosperity and national security, the advancement of maritime commerce, and efforts to support coastal resilience and management. During the discussions and public comments, the importance of partnerships and stakeholder perspectives were repeatedly mentioned, and their development was strongly encouraged.

An additional presentation about the impact of limited visibility (fog) on maritime commerce provided high volume economic information emphasizing the Blue Economy. The HSRP was pleased to hear about progress being made to broadcast environmental data from NOAA's Physical Oceanographic Real-Time System (PORTS) sensors over the Automatic Identification Systems (AIS) already on vessels with the interagency cooperation from the U.S. Coast Guard. The HSRP has followed this with great interest as it partially stemmed from a 2018 HSRP recommendation.

HSRP provides the following recommendations:

1) In light of the importance of the NOMEC and ACMS mapping strategies to our national economic and environmental future, we recommend the following:
    a. Continual engagement strategies for the non-government entities be pursued and that you ask to carve out a formal role for stakeholders during the planning and development as well as the implementation and future updating of the plans.

b. The formation of a special interagency group that includes public/private participation with NOAA in the leadership role. Interagency coordination is an imperative part of the future and the HSRP believes NOAA should help lead this effort with their natural connections to all things oceanic and existing leadership as part of the Interagency Working Group on Ocean and Coastal Mapping.
c. HSRP believes the successful achievement of the goals of such a critical and extensive strategy will require the leadership of a dedicated individual with a broad view of national capabilities and a perspective that can serve the full range of needs of a national mapping program, and serve as a central point of contact for the commercial, non-governmental organizations, technology, and national security communities.
d. The federal investment in mapping technology for the U.S. Academic Research Fleet, and associated investments in developing a coordinated approach for best practices, calibration and operations, a fleet-wide solution for data management, and data synthesis efforts, have resulted in the creation of high-quality mapping data for vast areas of the global ocean. These resources and programs should be fully leveraged in the implementation of the strategy, particularly in the deepwater areas of the EEZ.
e. The HSRP and members of the public expressed concerns that as the NOMEC effort is undertaken, funding from already established yet underfunded critical programs (such as those that support marine navigation), will be diverted. The HSRP hopes that the magnitude of the Presidential Directive will be honored and recommends specific and sufficient new funding be requested and allocated to advance any new mapping missions that may be required to support the implementation plans, and in particular focus new NOS efforts in shallow water areas of the EEZ. HSRP recommends NOAA also continue the current mission at the same or an enhanced level to advance the continuing mapping mission of NOS.

2) The HSRP supported all goals and objectives of the Alaska Coastal Mapping Strategy and prepared a detailed whitepaper with recommendations for NOAA's Implementation Plan for mapping the intertidal zone. Major recommendations were prioritized as follows:
    a. To fill major gaps in the National Water Level Observation Network (NWLON) in Alaska and to make NOAA's Vertical Datum Transformation Tool (VDatum) operational throughout all of Alaska, use alternative lower cost systems for acquiring tidal data and establishing tidal datums in Alaska, using the NOAA Tidal Analysis Datums Calculator that enables partners to compute tidal datums themselves using NOS Center for Operational Oceanographic Products and Services (CO-OPS) methodologies and their data which may not be collected to NOAA's most rigorous NWLON standards. At a minimum, users must be able to predict high and low tides throughout Alaska.
    b. Use NOAA's Water Clarity Climatology Tool for predicting times and locations when waters are clearest for topobathymetric lidar and satellite-derived bathymetry (SDB) – technologies that are ineffective when waters are too turbid. Determine locations where SDB works and doesn't work. For areas where SDB does not work, acquire topobathymetric lidar at times and locations when water clarity is predicted to be the best, collecting data within ±2 hours of low tide when most of the intertidal zone is exposed.
    c. Where there are data voids in the topobathymetric lidar from either laser extinction or excessive turbidity, use Uncrewed Surface Vessels (USVs) with multi-beam echo sounders (MBES) to fill remaining voids out to a depth contour of 4 meters, i.e., the Navigable Area

Limit Line (NALL) in NOAA's Hydrographic Survey Specifications and Deliverables, a depth that satisfies all requirements for NOAA's National Shoreline, and the depth required by tug barges that supply coastal villages.

d. Expand the Alaska Mapping Executive Committee (AMEC) to include non-governmental coastal mapping stakeholders, with the development of quantifiable mapping standards as state-of-the-art technologies evolve.

3) The HSRP recommends NOAA follow up with Congressman Don Young with our thanks for his welcome video, ongoing interest in the Arctic, and share the HSRP's recommendation letter and the HSRP comments on the ACMS implementation plan with him and other members of Congress with Arctic and Alaska interests.

4) The HSRP members request NOAA commitment to prioritize high-resolution nearshore bathymetry for not only navigation but multi-use for storm surge modeling, run-up, inundation, 3D currents and coastal resilience studies.

The Panel members discussed repeatedly that navigation services around the country have adapted to the challenges of the COVID-19 pandemic and the impact of quarantine and social distancing. Many of those adaptions were highlighted along with the importance of technological transformations necessitated by the pandemic itself. HSRP recognizes NOAA and their contractors for their collaborative efforts to adapt and perform during the rapid challenges introduced by operating during a global pandemic.

The HSRP would appreciate updates on the efforts of the multiple and diverse array of USVs deployed in 2020 as a response to the quarantine procedures of COVID-19 from the Artic to Florida and the next steps with the National Spatial Reference System.

Attached please find key HSRP recommendations in the attached two papers focusing on the early planning for implementation plans for the NOMEC and ACMS to share with the NOMEC Council and AMEC, the public comments, meeting minutes, and HSRP's priorities matrix. The HSRP requests regular updates in future meetings on the engagement strategy and the development of the implementation plans for NOMEC and ACMS.

Sincerely,

Edward Saade
Chair, HSRP

Julie Thomas
Vice Chair, HSRP

Enclosures (5)
1) HSRP recommendations paper for the NOMEC implementation plan
2) HSRP recommendations paper for the ACMS implementation plan
3) Public Comments, HSRP meeting, September 2020
4) HSRP Meeting Minutes, September 23-24, 2020
5) HSRP Priorities Matrix, September 2020