NOAA Hydrographic Services Review Panel

Public Meeting

Portsmouth, New Hampshire, September 11 – 13, 2017

HSRP PUBLIC Agenda (version 8 - updated September 5, 2017)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Monday, September 11 – Day One *\*meeting times and agenda subject to change*

## Morning HSRP PUBLIC MEETING CONVENES, Prescott Ballroom

***Sheraton Portsmouth Hotel, 250 Market Street, Portsmouth, NH 03801***

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## 8:30 – 10:00 HSRP PUBLIC MEETING DAY 1 CONVENES

* Bill Hanson, HSRP chair
* Rear Admiral Shepard M. Smith, director, Office of Coast Survey (OCS), and HSRP designated federal official, National Ocean Service, National Oceanic and Atmospheric Administration
* HSRP member self-introductions
* Welcome from New England congressional delegation
  + Letters from The Honorable Jeanne Shaheen, NH, The Honorable Maggie Hassan, NH, and The Honorable Susan Collins, ME
  + Video from The Honorable Chellie Pingree, ME
* Dr. Paul Doremus, acting assistant secretary for conservation and management, NOAA
* Dr. Larry Mayer, Director, Center for Coastal and Ocean Mapping, University of New Hampshire; and Co-director, NOAA/UNH Joint Hydrographic Center (CCOM/UNH)

**10:00 – 10:15 Break**

**10:15 – 11:45 Unmanned Systems for Hydrographic Surveying**

This session will look at how industry is moving forward with autonomous systems to serve mapping, surveying, charting, and marine navigation.

**Moderator:** Carol Lockhart, HSRP Technology working group

* Captain E.J. Van den Ameele, Chief, NOS OCS Coast Survey Development Laboratory

***“Unmanned Systems Activities and Strategy in NOAA’s Office of Coast Survey”***

An overview of unmanned systems for hydrography, lessons learned to date, including the capabilities and limitations of each type of vehicle employed, and Coast Survey’s unmanned systems strategy moving forward.

* Thomas Chance, Chief Executive Officer, ASV Global

***“ASV’s for Hydrographic Surveying”***

An overview of unmanned surface vessels from a manufacturer’s perspective, including a more technical discussion of ASV’s, what challenges there are moving forward, and where the industry is heading.

* Doug Lockhart, Vice President & General Manager, Teledyne CARIS Inc.

***“Can We Afford Autonomy”***

Manned survey platforms can adequately address the technical requirements for hydrographic survey work. The advantage of autonomy must be found in the survey cost. This discussion will look at how we can balance capital and operational costs. We will look at cash flow to understand where and when autonomy currently fits in hydrography, and where we can expect it to fit as improvements are made to autonomous control and processing software. This discussion will focus on surface vehicles operating in depths of navigational interest.

* Rebecca T. Quintal, Hydrographic Survey & Data Solutions Manager, Leidos

***“Challenges for Long Duration Autonomous Surface Vessels”***

Based on developing the Anti-Submarine Warfare Continuous Trail Unmanned Vessel (ACTUV) Leidos will discuss challenges for autonomous surface vessels operating for long durations including avoiding hazards, COLREGS compliance, and the need for redundant systems.

**11:55 Public comment period**

**HSRP PUBLIC MEETING DAY 1 ADJOURNS**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Tuesday, September 12 – Day Two

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Morning HSRP PUBLIC MEETING DAY 2 CONVENES

**9:00 Public meeting**

* Bill Hanson, HSRP chair
* Rear Admiral Shepard M. Smith

**9:00 – 9:15 Overview and discussion of day one**

**9:15 – 11:55 Working Group report outs and discussion**

**9:15 – 10:30 Technology Working Group**

**HSRP discuss and develop consensus advice on Autonomous Systems Strategy, discussion of issue paper, other topics**

Ed Saade, co-chair, HSRP Technology working group

* Review comments, discuss and develop HSRP consensus recommendations for:
  + [OCS Autonomous Systems Roadmap DRAFT](https://www.nauticalcharts.noaa.gov/ocs/hsrp/seattle2017/documents/Executive-Summary-OCS0-Autonomous-Systems-Roadmap.pdf)  
    ([Autonomous Roadmap - 1 pager](https://www.nauticalcharts.noaa.gov/ocs/hsrp/seattle2017/documents/Autonomous-roadmap-1-pager.pdf) )
* Review, discuss and finalize issue paper and recommendations:
  + Research and development benefits for NOAA and industry

**10:30 – 10:45 Break**

**10:45 – 11:55** Dr. Dave Maune and Joyce Miller, co-chairs, HSRP Planning and Engagement working group

* Review, discuss and finalize issue paper and recommendations:
  + Precision Navigation issue paper, led by Kim Hall
* Updates on the Fleet Replacement and Precision Navigation, Captain Richard Brennan, Chief, NOS OCS Hydrographic Surveys Division
* Other topics – HSRP strategic goals, other

**11:55 – 12:10 Public comment period and review of day and session – end day two**

**12:10 – 1:30 Lunch on your own - (HSRP members / NOAA HSRP staff working lunch)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1:30 – 2:30 National Ocean Service’s navigation services priorities and updates**

* Richard Edwing, director, Center for Operational Oceanographic Products and Services
* Juliana Blackwell, director, National Geodetic Survey
* Rear Admiral Shepard M. Smith, director, Office of Coast Survey

**HSRP PUBLIC MEETING DAY 2 ADJOURNS**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Wednesday, September 13 – Day Three and depart

## Morning HSRP PUBLIC MEETING DAY 3 CONVENES

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**8:30 Public meeting convenes**

**8:30 – 8:40 Overview and discussion of day two**

**8:40 – 9:30 Terrestrial and Water Level Datums – the Nation’s reference framework**

An overview of datums and reference frames, how they are defined and updated, and their value to the nation. A two-part presentation outlines the tools that NOAA provides to assist in datum use, integration, and determination. As we look to the future, advances in technology are enabling NOAA to enhance and improve the Nation's spatial reference system; this modernization enables new capabilities, such as surveying to the ellipsoid, for hydrographic charting, maritime navigation, Marine Spatial Data Infrastructure consistency, and ocean and port engineering.

* Juliana Blackwell, Director, NGS
* Rich Edwing, Director, CO-OPS

**9:30 – 10:30 Short updates HSRP meeting topics**

* Jeff Lillycrop, Lead Technical Director for Civil Works (CW) Research & Development, and Technical Director (TD) for Navigation R&D, Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers
* Captain Richard Brennan, update on implementation of externally sourced data
* Ashley Chappell, 3D Nation Survey update - revisiting the National Enhanced Elevation Assessment for ocean and coastal elevation data,
* Dr. Dave Maune, update on Florida topographic/bathy lidar study

**10:30 – 10:45 Break**

**10:45 – 12:00 HSRP Emerging Arctic Priorities working group update**

As the rate of Arctic sea ice loss speeds up, the United States must consider the risks and opportunities for commerce and economic growth, including commercial shipping and fishing, energy development, and tourism. U.S safety and security of our maritime domain, the resilience of local communities, indigenous peoples and their subsistence cultures, and the health of Alaskan living marine resources and their ecosystems are concerns. Updated NOAA nautical charts, tools, and services for safe navigation are essential if the U.S. Arctic Marine Transportation System (MTS) is to be capable of meeting the region’s safety, security, economic development, and environmental protection needs. This session will review Arctic MTS infrastructure gaps and outlook, Extended Continental Shelf surveys, and the Arctic Maritime Spatial Data Infrastructure Project.

**Moderators**: **Dr. Lawson Brigham, HSRP member and Ashley Chappell**

* Arctic video message, Honorable Angus King, Senator from Maine
* Dr. Lawson Brigham, University of Alaska Fairbanks; chair, HSRP Emerging Arctic Priorities working group

***”Introduction on the Committee on Foreign Relations Study on Arctic Infrastructure”***

* CAPT (Ret. NOAA) Andy Armstrong, U.S. Arctic team lead, U.S. interagency Extended Continental Shelf project; co-chief scientist, Arctic mapping cruises

***“US Extended Continental Shelf Mapping in the Arctic”***

A review of the U.S. Extended Continental Shelf (ECS) bathymetric mapping program in the Arctic: a summary of the goals, methods, results, and implications of the Arctic seafloor mapping effort led by the NOAA/UNH Joint Hydrographic Center on behalf of the interagency U.S. ECS Project.

* Keith Dominic, Chief, Maritime Navigation Division and Arctic Source Lead, National Geospatial-Intelligence Agency

***“International Hydrographic Organization (IHO) Arctic Maritime Spatial Data Infrastructure Project and NGA Arctic Support”***

The Arctic Regional Hydrographic Commission has establish a working group that is establishing a Maritime Spatial Data Infrastructure for the Arctic. This will allow for discoverability, accessibility, and interoperability of marine geospatial data among a broader user base. The National Geospatial-Intelligence Agency (NGA) established a public Arctic website that provides foundational and Navigational information for the Arctic region.

**12:00 Public comment period**

**12:00 – 1:15 Public meeting lunch break – (HSRP members /staff working lunch**)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Afternoon HSRP PUBLIC MEETING RECONVENES

**1:15 – 3:00 HSRP finalize consensus advice on Autonomous Systems Roadmap document, finalize issue papers, develop recommendation letter**

Bill Hanson and Joyce Miller, HSRP co-chairs and working group chairs

* Meeting recap - all members round robin
* Recommendation letter
* HSRP consensus recommendations for:
  + [OCS Autonomous Systems Roadmap DRAFT](https://www.nauticalcharts.noaa.gov/ocs/hsrp/seattle2017/documents/Executive-Summary-OCS0-Autonomous-Systems-Roadmap.pdf)
* HSRP concurrence on issue papers and recommendations:
  + Precision Navigation issue paper
  + Research and development benefits for NOAA and industry
* Other topics – strategic priorities, HSRP chairs, next meetings, other topics of interest

**2:45 – 3:00 Review of day and meeting, recap of actions, recommendations, closing remarks, end of meeting**

HSRP co-chairs and members

**HSRP PUBLIC MEETING and DAY 3 CONCLUDES**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_