

## HSRP PRIORITIES MATRIX

	Topic	Brief Description	Status as of 3/4/2022	Current/Future Action Needed/Recommended	
1	Integrated Ocean and Coastal Mapping (IOCM)	Integrated Ocean and Coastal Mapping is defined as the practice of planning, acquiring, integrating, and disseminating ocean and coastal geospatial data and derivative products in a manner that permits easy access to and use by the greatest range of users.	IOCM requires intra- and inter-agency coordination with a focus on streamlining operations, reducing redundancies, improving efficiencies, developing common standards, and stimulating innovation and technological development.	-Ashley Chapell spoke to the P&E Working Group meeting for an overview and update. Following actions will be discussed and assessed. Also check with OCS for latest updates. -Include development of datacenter and National data standards (geospatial accuracy, characteristics, etc). -Julia Wallace (AHB) + Ashley to integrate bathy into NOAA from Christy Riser (NCEI) for ESD presentation, and where improvements could be made.	on-going
2	Precise navigation during restricted visibility. NOAA can play a role in: 1) providing precise and updated data of the navigation channels and ports infrastructures. 2) Increase real time data transmitting sensors around ports 3) Organize round table meetings and outreach between mariners, academia, and technology manufacturers to foster solutions for the industry	HSRP can help in: 1) connecting NOAA with the stake holders to open a dialogue on the subject of precise navigation in restricted visibility 2) Invite people with experience on the topic (ports, manufacturers, academia, etc.) to share their experiences 3) Connection with regulatory oversight if needed. 4) Provide recommendations for NOAA on enhancing existing products or the generation of new products to enable the precise navigation during restricted visibility		Meet with F4 Directors to discuss topic further. If not, then retire topic. (John)	March 2022 Virtual Meeting Presentation
3	National Policy issues	The mechanism for addressing the policy is with the CMTS. (Examples: Expand Precision Nav, develop regulations for UAV, develop more accurate restricted visibility sensors, develop further coordination and partnerships with industry)		Check with OCS regarding suggestions.	On-going
4	USACE-NOAA Partnership	Example: Issues about the standards to which US harbors and channels are charted in USACE and NOAA surveys. Not all harbors are charted to IHO Class I standards. Standardizing datums	2017 Surveying and Charting in US Channels, Harbors And Anchorages paper. Per Sean Duffy, Admiral Smith making key progress. Example is Smith's participation on the Mississippi River Coalition.	Updates from NOAA on ongoing conversations with USACE. Continue to highlight importance in meeting letter/notes. There are many topics that overlap with the USACE. Examples of the USACE funding many observations which feed into disaster S response/modeling. Continue the valuable partnership. Should this be expanded to include all government agencies?	On-going - Continue to encourage and endorse
5	Identify and quantify the benefits of NOAA's Hydrographic Services	Documenting stakeholder requirements for and benefits from hydrographic services is key to Congressional funding support - ie 3D nation benefits study has been extended through 2021.	Dave Maune is working with Ashley Chapell on the review of the NGS' 3D Nation Elevation Requirements and Benefits Study will be completed in 2021.	Russell Callendar asked that we look into this at Miami meeting Several HSRP members have submitted Mission Critical Activities for this study. The HSRP may be asked to review the draft study when completed.	On-going - Continue to encourage and endorse

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6	Chart of the Future - supplementary/navigation data management and distribution (Lindsay Gee and Ed Saade)	Similar to Ed Page additional item and relates to better use of current technology in the receipt, management and distribution navigation and related data.	Tech WG webinar May 9, 2018 Briana Sullivan, followed by briefing by Ed Saade	Combined Priority for USCG and AIS. The CG is now broadcasting PORTS data via AIS.	On-going - Continue to encourage and endorse
7	Disaster Response	NOAA function - products and services for response and recovery, continuous improvement. NOAA's ability to respond to stakeholder needs and requirements.	Julia Powell updated progress through the Precision Nav HD Chart and the Coast Survey Strategic Plan Focus of April 2018 meeting; Recommendations for post-disaster survey and enhanced information delivery and communication in Miami letter	Review NOAA's disaster response products and services and provide feedback to support NOAA's continuous improvement process.	On-going - Continue to encourage and endorse
8	Public-Private Partnerships	Blue economy-related - precision nav, resilience. Connect with local IOOS. How NOAA can facilitate partnerships. Focus areas include mapping, navigation, mitigation, resilience and climate change. Work also with National Geospatial Advisory Committee (NGAC) public Private Subcommittee to share case studies.	NOAA is making great strides in their public/private partnerships.	Mapping is good example of public-private partnerships going forward. Others with OCS/CO-OPS/NGS?	On-going - Continue to encourage and endorse. Submitted 2 cases studies to NGAC.
9	Resilience: Relative Sea Level Rise and coastal flooding	Advocate for the continued measurements of relative sea level rise (sea level rise + subsidence) and increased measurements of water levels in coastal areas. Continue measurements by CO-OPS and by NGS in collaboration with NASA, USGS, and other state, local and industry partners. Critically important for infrastructure, transportation, storm water managers and other coastal decision makers.	Update Issue Paper on SLR and coastal and, potentially port, resilience. Nicole Elko lead. Check with Mark Osler about the efficacy of combining coastal and port resilience in one Issue Paper.	SLR Issue paper outline - 1: geodetic observations, emphasizing common datums and standard output. 2: long- and short- term observation systems, 3: Tidal and statistical analysis tools, 4: Model coupling, 5: Public Education (CMTS, advisory committees, etc.). Obtain stats for US Coastal SLR and Subsidence Wrap into Coastal Resilience Issue Paper - Nicole Elko	Mar-22
10	Incorporating non-authoritative sources into hydrographic products	Crowd sourcing; satellite-derived bathymetry; IOCM and IWG-OCM work;		Ed Saade - Seabed 2030, Ashley Chappell IOCM	Sep-21
11	Hydrodynamic Modeling and Validation	Ocean Forecast System - Automated integration of observing system data. The need for data inputs to hydrodynamic modeling as it pertains to navigation within the nearshore.	In Progress - OCS will present a webinar on OFS during one of our future Working Tech telcons.	The OFS is being rolled to different regions of the US. San Francisco has their system, so good topic to add to the SF meeting agenda.  Hydrodynamic models for ports could be part of aid to navigation.	SAN FRANCISCO 2022-2023 (TBD) (There will also be a panel discussing Coastal Ocean Modeling in Support of Marine Navigation and the Blue Economy during the March 2021
12	Offshore Wind Farm Development	President Biden's request for wind farm expansion and the on-going projects around the coastal U.S.	Tech WG presentations and updates from HSRP members.	Presentations at Virtual Sep 2021 Public meeting	Sep-21
13	Digital Twins: Can NOAA benefit from the concept of Digital Twins?	Digital Twins concept is posing itself to be the modern way of managing infrastructure or a facility. Whether, it is for a port, a ship, or navigation channel, DT is the most efficient way to create a replica of the physical environment that can be used during planning, construction and management of the utility.		Invite few more speakers who had positive experience with the concept to learn from	

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14	Address the Quality Control of data provided by external partners.	OCS, NGS and CO-OPS receive many data sets from external partners, and the NOMECS strategy is likely to see a significant increase in quantity, particularly for mapping data. It is important that they have the coordination and resources to assure that these data are not delayed in being quality controlled and incorporated in updated NOAA products.	Lindsay raised this issue regarding some of the bathy data that were sent to ESD but was still in the queue for assessment of suitability for charting. Because they are not through the QC they are not visible to others. A separate path is to send to NCEI so at least others know an area is mapped. However, NCEI are not responsible for the QC for suitability for charting or other products. To make the data useful, the QC must be performed.	Discuss this topics with the Directors and the panel to decide how we want to proceed.	Possible topic for September 2022 meeting.
<b>FORMAL RESPONSE - POSITION PAPERS</b>					
14	Strategy for Mapping, Exploring, Characterizing the U.S. EEZ; NOAA response to Sec 2, November 2019 Presidential Memo	The draft National Ocean Mapping, Exploration and Characterization Strategy (NOMECS) is expected to document innovative technologies and resources needed to map, explore and characterize the ocean floor through acoustic technologies and innovative platforms. Funding is expected to be an issue.	Should we submit one formal response including Arctic/Alaska along with NOMECS?	Ed Saade (Lead) and HSRP Technology Working Group to coordinate draft IP and priorities with NOAA and HSRP members for consideration in Hawaii.	Submitted Sep 2020
15	Autonomous Vessels - surveying	Emerging technology/innovation, NOAA strategy; Advances and challenges	Responded to NOAA's request for comments on autonomous strategy 2017	RADM Gallaudet requested HSRP attention 2018 ; Tech WG tracking for future ideas/needs; follow up as needed on NOAA strategy. Possible visit to Saildrone in SF.	SAN FRANCISCO 2022-2023 (TBD)
<b>ISSUE OR WHITE PAPERS</b>					
16	Alaska Coastal Mapping Strategy for mapping the shoreline and nearshore of Alaska; NOAA response to Sec 3, November 2019 Presidential Memo	The draft Alaska Coastal Mapping Strategy (ACMS) is expected to document tidal datum needs, seamless topobathy lidar needs for shoreline and nearshore mapping, and improvements needed for VDatum to cover all of Alaska. Funding is expected to be an issue.	Approved by HSRP in 8/2019 to prepare draft Issue Paper for future consideration by the HSRP, pending receipt of the ACMS already under development prior to the Presidential Memo which added increased urgency and Presidential priority. Currently awaiting WH approval of the draft ACMS submitted in 4/2020. Then the HSRP will itself draft an Issue Paper that clarifies the issues, assesses the goals, and makes specific recommendations to the NOAA Administrator.	Dave Maune to coordinate draft IP and priorities with Alaska Mapping Executive Committee, NOAA and HSRP members for consideration in Hawaii.	Virtual Sep 2020
17	Disaster Response	NOAA function - products and services for response and recovery, continuous improvement. NOAA's ability to respond to stakeholder needs and requirements.	Recommendations for post-disaster survey and enhanced information delivery and communication in Miami letter	Capt Kretovic updated progress through the Precision Nav HD Chart and the Coast Survey Strategic Plan	Submitted 5/2020

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18	Expanding Maritime Services in the Arctic	The opportunity exists for NOAA National Ocean Service (NOS) to leverage new technologies to deliver innovative product and service solutions. The challenges, needs and proposed solutions are summarized below.	ISSUE PAPER AUG 2019 - Ed Page Lead	Improve infrastructure and communications, additional water level sensors and updated bathymetry.	TRACK
18	Relative Sea Level Rise and high tide flooding	Advocate for the continued measurements of relative sea level rise (sea level rise + subsidence) in coastal areas. Continue measurements by CO-OPS and by NGS in collaboration with NASA and USGS. Critically important for storm water managers and other decision makers.	ISSUE PAPER AUG 2019	Issue paper outline - 1: geodetic observations, emphasizing common datums and standard output. 2: long term observations, 3: Climate and statistical analysis tools, 4: Model coupling, 5: Public Education (CMTS, advisory committees, etc.). Obtain stats for US Coastal SLR and Subsidence.	TRACK
19	Enhanced Navigational Assistance	Continued roll-out and expansion of PORTS. Types of observational data needed for safe port/harbor operations. Restricted visibility sensors could be addressed as part of this expansion.	Precision nav ISSUE PAPER, revised May 2018; Recommendations in Miami letter	What can the committee do to increase the availability and accuracy of restricted visibility forecast and real time visibility data via PORTS? Lindsay will address this topic through the Tech Working Group. They will look at key considerations and benefits.	TRACK
20	USACE-NOAA Partnership	Example: Issues about the standards to which US harbors and channels are charted in USACE and NOAA surveys. Not all harbors are charted to IHO Class I standards.	ISSUE PAPER 2017 Surveying and Charting in US Channels, Harbors And Anchorages paper	Updates from NOAA on ongoing conversations with USACE. Continue to highlight importance in meeting letter/notes. There are many topics that overlap with the USACE. Examples of the USACE funding many observations which feed into disaster response/modeling. Continue the valuable partnership.	TRACK
20	Marine and Geospatial Information Infrastructure	Critical information infrastructure that supports physical infrastructure. This includes managing big data, and making use of artificial intelligence.	May 2018 ISSUE PAPER	Keep track of issue following issue paper promulgation.	TRACK
21	Hydrographic Survey Fleet	The need to replace the NOAA ships Rainier and Fairweather for Arctic/ Alaska survey needs.	2018 Hydrographic Survey Fleet paper updated; update at New Orleans meeting by Captain Brennan	Regular fleet updates from NOAA.	TRACK

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			<b>ARCHIVE</b>		
<b>23</b>	Information Dissemination	Getting the wealth of data/information collected/aggregated/analyzed/etc.	Recommendation in Miami 2018 Letter to Acting Administrator -	Overlaps with Education and Public-Private Partnerships.	TRACK, merge with public
<b>24</b>	Hardening of Offshore Observing Sites	Strategic approach to hardening sites			
<b>25</b>	NOAA's application of IoT, AI and M2m (Ed Page)		Recommend exploring this new subject by the technology sub committee of HSRP.		Ed Page and Admiral Smith to follow up
<b>26</b>	Arctic Charting/Plan		Arctic issue paper 2016; Arctic report 2015(?)	Ed Page leading update of Arctic issue paper	Ed Page will replace this with Arctic Plan
<b>27</b>	Education	Promoting hydrographic education/ Involving younger hydro professionals/students in HSRP. Goal: Further outreach to the academic community to promote hydro/geodetic/etc. programs through exposure to HSRP and NOAA/OCS.	Invite Southern Miss hydro program students and faculty to the HSRP meeting in New Orleans with the goal of getting them in the room and participating.	Within the scope of the panel, invite hydro/oceano students to HSRP meetings; look into getting young scientists involved with HSRP (e.g. Sea Grant)	New Orleans, move to archives, reach out to local universities invite to meeting