

04c HSRP\_Priorities Matrix\_Master\_SEPT2023 WORKING.xlsx

#	Topic	Brief Description	Status as of 9/29/2023	Current/Future Action Needed/Recommended	Status
1	Metadata Standardization for Hydrographic Data  (Lindsay to update title)	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.  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.	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. <b>Archive data from different sources and available to produce products (Bri and Lindsay - spring meeting) Have a document to bring forward for the next meeting (NBS, blue topo) progress has been made - Outreach to reduce confusion. (connective tissue between data and public access)</b>	on-going - Further actions - even across NOAA there are different approaches to metadata standardization.  Focused on bathy. Best available data for nautical charting.
2	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 and Evans 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?  <b>Include USGS to the topic.</b>	On-going - Continue to encourage and endorse  Role for USACE to be involved in the Spring 2024 meeting
3	<del>Disaster Response</del> - Coastal resilience, relative sea level change and coastal flooding	NOAA function - products and services for response and recovery, continuous improvement. NOAA's ability to respond to stakeholder needs and requirements. 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.	Submitted Issue Paper on Coastal Resilience 10/22. Future: Check with Mark Osler about the efficacy of combining coastal and port resilience in one Issue Paper.  <b>9/29 - Recommendation to ask to track to the progress for CR - what is the measure of success in the letter to the administrator.</b>  <b>Letter for administrator - services are needed by communities and resilience funding isn't necessarily addressing that and what communities are funded, provide an overview status and how it is being rolled out to the communities.</b>	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.). Obtained stats for US Coastal SLR and Subsidence Wrap into Coastal Resilience Issue Paper - Nicole Elko  <b>Progress on BIL efforts - number of grants, contracts, etc..</b>	White Paper Completed in Oct 22 - continue to track  JULIE to update, talk with Mark Osler and Nicole Elko
4	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  <b>9/29 - Technical P&amp;E to get exposed to the challenge, then a panel and then the issue.</b>	On-going  9/29 - Seabed mobility issue paper proposed during Fall 2023 meeting (Deanne)

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5	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. Precision Navigation is one of the examples that can be demonstrated during the Digital Twin presentation.		Invite few more speakers who had positive experience with the concept to learn from  <b>9/29 - Host another panel for where industry is. For the next meeting agenda</b>	<b>Combine with Digital Twin panel topic for September 2023 Meeting - Qassim, Sean, Anuj, Galen</b>
6	Hydrographic Survey Fleet & Maritime Workforce	The need to replace the NOAA ships Rainier and Fairweather for Arctic/ Alaska survey needs.	2018 Hydrographic Survey Fleet paper updated; update from Ben Evans and Briana Hillstrom, Honolulu 2022 Brennan	Regular fleet updates from NOAA.  <b>9/29 - Potential for updates on the build out, maybe lunchtime . Note in recommendation letter</b>	TRACK - beyond NOAA ships, also include NRTs and UxS
7	Foundational Data and services to isolated underserved communities	There are many small ports in underserved, remote areas that need help! What can NOAA do to support these areas.		-Include regional mapping strategies (Puerto Rico) - Issue Paper on Equitable Service Delivery  <b>9/29 - Also foundational data for communities. Work to develop with Nicole and Tuba to get an issue paper pulled together. Follow up with the PORTS report after the next meeting and how underserved communities are considered in the report.</b>	Director's update might include further details about this.
8	Sustainability	To be covered under the Technology Working group Create a separate group to look at GHG emissions scope 1-3, what is measurable for when they would be measurable and create a timeline.		<b>9/29 - Weren't sure how the policy would be rolled out, the net zero by 2050, measure to manage.</b>	Anuj will lead this effort through the Tech Working Groups.
<b>FORMAL RESPONSE - POSITION PAPERS</b>					
10	Incorporating non-authoritative sources into hydrographic products. Strategy for Mapping, Exploring, Characterizing the U.S. EEZ; NOAA response to Sec 2, November 2019 Presidential Memo	Crowd sourcing; satellite-derived bathymetry; IOCM and IWG-OCM work. 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 Puerto Rico. Ashley Chapell NOAA lead.	Submitted Sep 2020 with possible update 2023
11	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>					

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12	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 <b>Complete</b> <a href="https://www.nauticalcharts.noaa.gov/hsrp/meetings/new-orleans-2019/committee-letter/slr-ip-hsrp-sept201-v8oct2019-final.pdf">https://www.nauticalcharts.noaa.gov/hsrp/meetings/new-orleans-2019/committee-letter/slr-ip-hsrp-sept201-v8oct2019-final.pdf</a>
13	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 <b>Complete</b> <a href="https://www.nauticalcharts.noaa.gov/hsrp/meetings/webinar-2020/emergency-response-ai-hsrp-">https://www.nauticalcharts.noaa.gov/hsrp/meetings/webinar-2020/emergency-response-ai-hsrp-</a>
14	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 <b>Complete</b> <a href="https://www.nauticalcharts.noaa.gov/hsrp/meetings/new-orleans-2019/committee-letter/arctic-ip-hsrp-sept201-v8oct2019-final.pdf">https://www.nauticalcharts.noaa.gov/hsrp/meetings/new-orleans-2019/committee-letter/arctic-ip-hsrp-sept201-v8oct2019-final.pdf</a>
15	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.	<b>Complete</b> Updated Issue Paper submitted Oct 2022 <a href="https://www.nauticalcharts.noaa.gov/hsrp/meetings/new-orleans-2019/committee-letter/slr-ip-hsrp-sept201-v8oct2019-final.pdf">https://www.nauticalcharts.noaa.gov/hsrp/meetings/new-orleans-2019/committee-letter/slr-ip-hsrp-sept201-v8oct2019-final.pdf</a>
16	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 ( <a href="https://www.nauticalcharts.noaa.gov/hsrp/recommendations/2018/HSRP-Precision-Navigation-10May2018%20.pdf">https://www.nauticalcharts.noaa.gov/hsrp/recommendations/2018/HSRP-Precision-Navigation-10May2018%20.pdf</a> ), 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.	<b>Complete</b> <a href="https://www.nauticalcharts.noaa.gov/hsrp/recommendations/2018/HSRP-PORTS-Critical-Data-for-Critical-Decisions-28feb2018.pdf">https://www.nauticalcharts.noaa.gov/hsrp/recommendations/2018/HSRP-PORTS-Critical-Data-for-Critical-Decisions-28feb2018.pdf</a>
17	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
18	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.	<b>Complete</b> <a href="https://www.nauticalcharts.noaa.gov/hsrp/recommendations/2018/HSRP-MGDI-Blue-Economy-">https://www.nauticalcharts.noaa.gov/hsrp/recommendations/2018/HSRP-MGDI-Blue-Economy-</a>
19	Public Private Partnerships			<a href="https://nauticalcharts.noaa.gov/hsrp/recommendations/2022/HSRP-PublicPrivatePartnerships.pdf">https://nauticalcharts.noaa.gov/hsrp/recommendations/2022/HSRP-PublicPrivatePartnerships.pdf</a>	<b>Complete</b>

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20	Electronic Navigational Charts and Paper Charts for Small Vessels			<a href="https://nauticalcharts.noaa.gov/hsrp/recommendations/2022/HSRP-ENCsmallBoats.pdf">https://nauticalcharts.noaa.gov/hsrp/recommendations/2022/HSRP-ENCsmallBoats.pdf</a>	Complete
21	NSRS: All U.S. Latitudes, Longitudes, and Elevations to Change			<a href="https://nauticalcharts.noaa.gov/hsrp/recommendations/2022/HSRP-NSRS.pdf">https://nauticalcharts.noaa.gov/hsrp/recommendations/2022/HSRP-NSRS.pdf</a>	Complete
21	Geodesy Crisis	04b Geodesy_Crisis_Draft.9.21.23 (header)			Near Final to be completed by December 2023.
22	Digital Twin	<a href="https://drive.google.com/file/d/1nMBhIMxp_Cu0sM4_JXvEtKeW8uSx0rV/view?usp=drive_link">https://drive.google.com/file/d/1nMBhIMxp_Cu0sM4_JXvEtKeW8uSx0rV/view?usp=drive_link</a>			Near Final
23	Seabed Mobility	Proposed during the Fall 2023 meeting. Connected to Offshore Energy as sand and sediment could support			NEW
24	Maritime Workforce Crisis	Proposed during Fall 2023 meeting. Distinct from Geodesy Crisis, the Maritime Workforce crisis is about the decline in enrollment in Maritime Academies and wage mariners.			NEW
25	Underserved Communities				NEW
26	Data Connectivity				NEW

			ARCHIVE		
27	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
28	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

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29	Hardening of Offshore Observing Sites	Strategic approach to hardening sites			
30	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
31	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
32	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
33	Public-Private Partnerships - Address the Quality Control of data provided by external partners.	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. 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.	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? Discuss this topics with the Directors and the panel to decide how we want to proceed.	On-going - Continue to encourage and endorse. Submitted 2 cases studies to NGAC.
	What models are being	Ocean Forecast System - Automated integration of	In Progress - OCS will present a webinar on OFS	The OFS is being rolled to different regions of the US.	Provide details on the coastal models