



IHO File No. S1/6100/2020

ASSEMBLY CIRCULAR LETTER N° 2 bis 1
22 May 2019

2nd SESSION OF THE IHO ASSEMBLY (A-2)

Monaco, 21-24 April 2020

**NOMINATION OF REAR ADMIRAL SHEPARD M. SMITH
BY THE UNITED STATES OF AMERICA FOR
THE POSITION OF IHO DIRECTOR**

References:

- A. Assembly Circular Letter No.2 dated 03 May 2019 – *Call for nomination of candidates for the position of IHO Director.*
- B. General Regulations of the IHO, Article 21

Dear Hydrographer,

1. Reference A invited IHO Member States to nominate candidates for the position of IHO Director and indicated that the names of candidates and their nomination forms will be published as soon as they are received.
2. The United States of America has nominated **Rear Admiral Shepard M. SMITH** to stand for election at the 2nd Session of the IHO Assembly for the post of Director of the IHO. The nomination form is enclosed.
3. As required by Reference B, the Secretary-General will collate all the nominations received and present a consolidated inventory as part of the documentation for the consideration of the Assembly.

Yours sincerely,

A handwritten signature in blue ink, which appears to read 'Mathias Jonas', is written over a light blue circular stamp.

Dr Mathias JONAS
Secretary-General

Annex: Nomination Form from the USA

Hydrographic information driving marine knowledge

**Candidature for a post of
DIRECTOR**

(Article 20 of the General Regulations)



**Candidature à un poste de
DIRECTEUR**

(Article 20 du Règlement général)

GENERAL - GENERALITES

1. **Nominating Member State - Etat membre qui présente le candidat :**

United States of America

2. **Name - Nom :**

Rear Admiral Shepard M. Smith, NOAA

3. **Nationality - Nationalité :**

USA

4. **Date of birth - Date de naissance :**

November 5, 1968

5. **Titles and décorations - Titres et décorations :**

Rear Admiral (lower half), NOAA
Director, NOAA Office of Coast Survey, National Hydrographer
Commissioner, Mississippi River Commission (presidential appointee)

Department of Commerce Gold Medal for Heroism (to ship under my command)

Department of Commerce Gold Medal, 1996 TWA Flight 800

Department of Commerce Bronze Medal

2017 Operational transition of unmanned surface vessels for hydrography

2006 Ground-breaking international collaborative survey with Mexico

2000 Egypt Air Flight 990 debris search and investigation

NOAA Corps Commendation Medal

2012 For outstanding service to the Assistant Secretary

2011 For outstanding leadership at sea during the Deepwater Horizon response

2009 For exceptional hydrographic technical innovation and management

Thirty-two additional awards including five NOAA Corps Special Achievement medals, the Society of

American Military Engineers' Colbert Medal, the Association of Commissioned Officers' Engineering

Award, three USCG awards, one National Intelligence Unit Citation, six

NOAA Unit Citations and the NOAA Corps Outstanding Volunteer Service Medal.

NOAA Command at Sea Insignia

NOAA Senior Watch Officer

NOAA Divemaster

EDUCATION AND LANGUAGES - *ETUDES ET LANGUES*

6. **Education** (periods, including specialized or special qualifications) - *Etudes (durée, y compris les qualifications spécialisées ou particulières)* :

Harvard University Kennedy School of Government, Senior Executive Fellows, (4 weeks), 2013
Master of Science in Ocean Engineering, University of New Hampshire, Completed IHO Cat "A"
Hydrographic Program. 2000-2003
Bachelors of Science, Mechanical Engineering, Cornell University, 1990-1993
Deep Springs College 1988-1990

NOAA Leadership Competencies Development Program (24 months), 2005-2007

STCW courses in ECDIS, Radar Observer, GMDSS, Navigation, Advanced Firefighting, and Bridge Resource Management

NOAA Introduction to Hydrography (4 weeks), 1994
Shallow Water Multibeam short course (3 weeks), 1998
NOAA Divemaster, 2003

7. **Languages** (speaking and reading capacity) - *Langues (niveau oral et écrit)* :

English (mother tongue)
Spanish and French (understand and read at basic level)

SERVICE AND EXPERIENCE - *SERVICES ET EXPERIENCE*

8.a. **Hydrographic service** - *Services dans l'hydrographie* :

National Service

2016-present Director, NOAA Office of Coast Survey
Responsible for hydrographic surveying and charting US domestic waters and territories. 200 employees, annual budget \$60M-\$100M, task four NOAA hydrographic ships, sponsor and oversee two R&D programs (UNH and USM).

2009-2011 and 2015-2016 Commanding Officer, NOAA Ship Thomas Jefferson.
63m Hydrographic Survey Ship, Two launches plus two ASVs, crew of 35. Served in dual capacity of ship's captain and chief scientist of the hydrographic mission. Deployments on US East and Gulf Coasts, including in response to Deepwater Horizon oil spill. Rescued downed pilot in Florida Keys at night. Hosted exchange delegations from UK, Nigeria, Japan, and Canada.

2014-2015 NOAA Deputy Hydrographer
Senior policy advisor and representative to Director, Coast Survey. Served on the IHO's Arctic Regional Hydrographic Commission and the interagency Marine Executive Steering Group for interagency US government charting and navigation policy.

2012-2014 Chief, Marine Chart Division
Responsible for NOAA ENC and paper chart production. Led the transition to database-driven ENC production, and 100% continuous maintenance, print-on-demand chart production.

2007-2009 Chief, Atlantic Hydrographic Branch
Responsible for quality assessment of all Atlantic hydrographic surveys. Increased throughput at AHB by threefold and initiated broad use of bathy data from non-hydrographic sources. Led NOAA's transition to Navigation Surface-based cartography, including development of specifications, workflows, and joint technology development with Caris.

Relevant Scientific Activities - *Activités scientifiques* :

Selected Conferences

Keynote Speaker, US Hydrographic Conference, 2018 and 2016
Keynote Speaker at Shallow Survey Conference, Plymouth, UK 2015
Oceanology 2018, London. Seabed 2030: A Plan for High-Resolution Maps of the Ocean by 2030
Technical Papers at Shallow Survey, US Hydro, Canadian Hydro [list if possible]
University of California, Berkeley Geography Graduate Symposium. Surveying America's Seven Coasts, 2018
E-Navigation Conference, The Future of e-Navigation in the US, December 2015

Selected Public Communications

Podcast: Making Waves: Charting new waters.
<https://oceanservice.noaa.gov/podcast/may16/mw136-charting-new-waters.html>

NOAA crew uses ocean science and nautical skill to save downed pilot. Professional Mariner, November 23, 2010.
<http://www.professionalmariner.com/October-2010/NOAA-crew-uses-ocean-science-and-nautical-skill-to-save-downed-pilot/>

Reddit AMA: Online open forum "Ask Me Anything." 2018.
https://www.reddit.com/r/science/comments/8sqmin/hi_reddit_were_rear_admiral_shep_smith_director/

Selected Papers

Smith, S.M., 2018, Seabed 2030: A Call to Action: Hydro International
(<https://www.hydro-international.com/content/article/seabed-2030-a-call-to-action>)

Smith, S.M., 2015, Future Navigation: Building upon navigation's history: Proceedings of the Marine Safety and Security Council 72:2 p 11-14
(https://www.uscg.mil/proceedings/archive/2015/Vol72_No2_Sum2015.pdf)

Smith, S.M., 2015, Excited by Automation Driven by Autonomous Vehicles: Hydro International. Featured Interview
(<http://www.hydro-international.com/content/article/excited-by-automation-driven-by-autonomous-vehicles>)

Smith, S.M., 2003 The Navigation Surface : a multipurpose bathymetric database. Masters Thesis, University of New Hampshire.

Smith, S.M., 2002, The Navigation Surface: A New Database Approach to Creating Multiple Products from High Density Surveys. International Hydrographic Review 3:2 p12-19.

CANDIDATE'S POSITION - *POSITION DU CANDIDAT*

Fellow Hydrographers,

I offer myself for service at the IHO at a time of rapid change in our field, when the IHO has a vital role to play in leading this change.

First and most importantly, the role of hydrographic offices individually, and collectively through the IHO, is to provide the world with accurate and up-to-date hydrographic services. For most of our shared history, this consisted of paper charts and nautical publications—sailing directions, tide and current tables, and light lists. We are charged by the IMO and our signatory nations to provide these services in a coordinated and consistent way globally. The information contained in these traditional products now have modern equivalents in the ENC and services based on the S-100 series of standards. Our challenge in the decade ahead is to complete the global transition to digital services, and serve these to the world's maritime community. In order to “deliver as one,” these services must be consistent and distributed in an integrated network of service providers. The IHO has a role in coordinating the provision of these services, and representing the HOs to other intergovernmental organizations such as IMO and IALA.

Second, the world's HOs collectively hold a vast amount of data that is valuable for sustainably managing our oceans and fisheries, helping coastal communities adapt to climate change and sea level rise, and predicting tsunami runup and storm surge. Many HOs are uniquely positioned within their governments to provide authoritative ocean data to decision-makers and the public in support of these goals, and the rigorous culture of our discipline makes HOs the natural foundation for our national Marine Spatial Data Infrastructure services. The IHO can promote global best practices for MSDI, and assist HOs to take on this important role. In addition, there is a big opportunity for our community to contribute and lead in global campaigns like Seabed 2030, the UN Decade of Ocean Science, and the UN GGIM.

Third, the IHO is well-positioned to coordinate the continued development of hydrographic capacity and service delivery worldwide. Smaller member states rely on the IHO for training, consultation, and networking in order to fulfill their national obligations under SOLAS V. As we transition to more digital services, the scope of capacity building will need to be broader to include data discovery, management, and assessment, and support for additional dynamic data services. In managing the capacity building program, we need to link our success to adding measurable capacity to global hydrographic services.

Lastly, the IHO needs to actively promote hydrography within the community of intergovernmental organizations. The future relevance of hydrographic offices and the IHO depends on the extent to which we are leaning forward to align our work with the information demands of the next generation of maritime users, ocean science, and coastal resilience.

ADDITIONAL INFORMATION - RENSEIGNEMENTS COMPLEMENTAIRES
(if any) (le cas échéant)

I have been a career hydrographer, with strong execution and change leadership roles from launch hydrographer to Director of the U.S. national hydrographic office. As an ensign, I led the transition to PC-based hydrographic acquisition and processing on my ship. As a lieutenant junior grade, I led the fleetwide transition to GIS-based hydrography. As a lieutenant, I designed a modeled grid-based workflow for hydrography and cartography and transitioned it to commercial implementation. It has since been broadly adopted worldwide and is the basis for the S-102 standard. As a lieutenant commander, I tripled the production of the data processing center I managed, and used the extra capacity to bring in much more data from non-hydrographic sources to improve our charts. As a commander, I was the commanding officer of a survey ship, transitioning the ship to ellipsoid-based surveying and leading a few high-profile projects, including the response to the Deepwater Horizon oil spill. As a captain, I led our charting division to 100% print-on-demand for paper charts, and to maintain "ENCs first." During a second command tour, I incorporated unmanned survey vessels into our daily operations for very shallow water survey work.

I took over a strong organization as Coast Survey director in 2016. As a result, I have been able to focus my leadership on long-term strategic objectives.

Last year, we published the National Charting Plan, which lays out our decadal plans for building a next generation ENC suite with more detail and consistent attribution, which will serve maritime users from recreational boating to unmanned shipping. It will also provide the information backbone to support serving authoritative themes as web services as part of our national MSDI. We have already begun to issue new charts under this program, and the pace will accelerate in coming years. This plan provides the basis of the US contribution to regional ENC schemes in the USCHC, ARHC, MACHC, SWPHC, and EAHC regions where the US has charting responsibilities.

Also in 2017, I approved a sweeping policy clarification which made explicit our longstanding policy to use the "best available data" for our charts. This has allowed us to be much more proactive in seeking out data from other disciplines and new technologies. To implement this policy, we now have teams actively working on data discovery, ingest of external source data, and use of satellite derived bathymetry for change detection and preliminary charting. As a result, NOAA charts are notably much more up-to-date and we have built strong partnerships with other agencies and programs.

Under a program called "precision navigation," we are expanding our five-year old program to produce high definition charts for navigation in port areas. We are leading a NOAA-wide program to deliver a suite of services based on the IHO S-100 standards, which will include HD charts, real time and forecast water levels, air gaps, and surface currents, and real-time and forecast weather and waves. These will be distributed through an integrated machine-to-machine system, and will be compatible with dynamic underkeel clearance systems and portable pilot units.

We are restructuring our hydrographic survey program, to promote more collaborative surveys with other agencies and programs, to increase efficiencies and leverage more high quality data for charting. Just as importantly, we have expanded the scope of our user base through open data policies and bathymetric services, to include hydrodynamic modeling, marine geology, offshore energy, and habitat mapping. Since the inception of Seabed 2030, my office has led the national coalition to map US waters, by creating a gap analysis and maintaining an interagency web mapping portal to coordinate survey projects. We funded the creation of a global crowdsourced bathymetry database, and have developed several key partners in the private sector to contribute bathymetric data.

In addition, we are investing heavily in maturing unmanned survey vessels for hydrography, as portable response units, to be used from ships, and in long-endurance independent operations. We are supporting university development of improved control systems, operational use in our own work and with our hydrographic contractors, and development and testing of launch and recovery systems and sensor integrations. At the same time, we are automating our data processing and training our workforce, so that we will be prepared to take this technology to scale.

We have recently expanded our training programs to include an S-8 Cat-B program and an innovative chart adequacy workshop, and have made them available to international participants. By teaching these programs using state-of-the-art technology and with university participation, we are preparing our employees for the high pace of technological change we are expecting in the years to come.

Many of the priorities that I have taken on during my career at NOAA align with the strategic directions of the IHO, and will be the focus of our work in the years ahead: launching new standards and services, integrating with other ocean disciplines, investing in our people and increasing global hydrographic capacity.

Date: May 3, 2019

Signature of candidate:

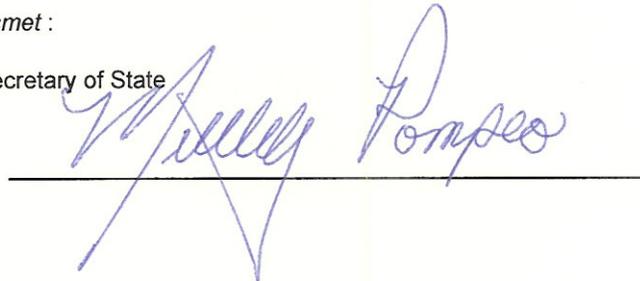


Signature du candidat :

Forwarding Authority - *Autorité qui transmet :*

The Honorable Michael Pompeo, US Secretary of State

Signature of forwarding authority:



Signature de l'autorité qui transmet :