

Attachments to  
Action Status Draft Summary Table for USCHC 47

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## Attachment 1

### INFORMATIONAL To USCHC47:

#### Marine Protected Areas within the US-Canada Hydrographic Commission

**Submitted by:** Jonathan Justi & Julio Castillo, NOAA Office of Coast Survey

**Executive Summary:** This paper is the result of an assessment of existing marine protected areas (as defined by IUCN and inventoried on ProtectedSeas.org) to identify the nature and extent of MPAs identified. The results inform the hydrographic offices of the USCHC for informational purposes and to consider the implications of ProtectedSeas inventory, IHO intent to promulgate the S-122 product specification and charting.

**Related Documents:** USCHC46 Minutes Discussion of S-122

**Related Projects:** <https://protectedseas.net/>

<https://marineprotectedareas.noaa.gov/aboutmpas/mpacenter/>

[S-122 Product Specification](#) (ed. 1.0.0)

[IHO NIPWG 2023 - S-122 Theory and Practice](#)

### **Introduction/Background**

This analysis is intended to serve as a first step in raising awareness of existing Marine Protected Area (MPA) information that exists within the US-Canada Hydrographic Commission (Region A). The ProtectedSeas organization is collecting available information and formatting a dataset to S-122 standards. This analysis uses a dataset provided by ProtectedSeas and GIS tools to isolate features attributed as MPAs within the USCHC.

### **Analysis/Discussion**

On cursory examination, it does not appear that 30% of the high seas in IHO region A is defined as MPA's in the ProtectedSeas database.

Most marine protected areas (as defined by protectedseas.org using the IUNC definition) in size and scope appear in near coastal waters.

ProtectedSeas captures many different types of marine areas beyond the traditional term of "marine protected area." "Protected seas" as defined by the ProtectedSeas organization includes areas such as fisheries managed zones, exclusive economic zones, reserves, sanctuaries and other areas that are managed or have regulations in some fashion.



Figure 1: MPA features (pink) within the USCHC boundary (translucent white). Note: Some features appear outside of the boundary because they are objects encoded as an MPA with multiple areas, including at least one existing in the USCHC boundary.

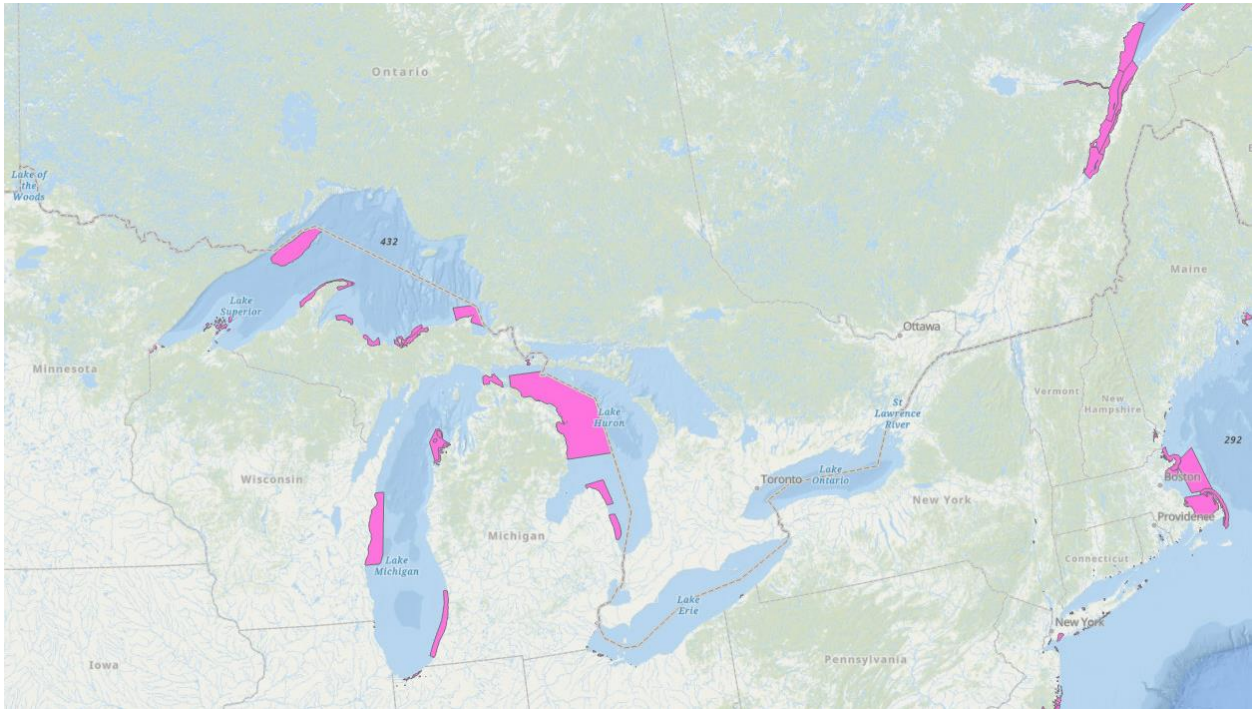


Figure 2: MPA features (pink) in the Great Lakes region, St. Lawrence River, and Northern Atlantic East Coast of the United States.

The United States maintains a National Marine Protected Area Center, a joint effort between the National Oceanic and Atmospheric Administration and the Department of Interior. The Center maintains a database but was not consulted at this time as it does not include the entire Region A.

### **Conclusions**

IHO Region A (USCHC) encompasses a significant portion of the global oceans. The S-100 hydrographic data model, the S-122 MPA product specification, and navigation services are of core importance to the hydrographic offices of Canada and the United States. The USCHC community should monitor developments and prospects of the S-122 product specification and potential areas of opportunity to support the UN Ocean Decade by demonstrating the value of the S-100 data model.

Total features provided by ProtectedSeas in global dataset: 21,328

Total MPAs worldwide (features with “category\_name” attributed as ‘IUCN MPA’): 11,359

Total MPAs within Region A limits: 1,007. This list is available on request to [Julio.Castillo@noaa.gov](mailto:Julio.Castillo@noaa.gov) .

### **Data Sources**

- [ProtectedSeas](#) (MPA Features)
- [IHO](#) USCHC Boundary. Note: There are inconsistencies in the region boundaries between this source, and the “INT\_boundary\_line” feature on the [ENC Coverage Catalogue](#) maintained by the IHO.

### **Recommendations**

USCHC is invited to:

- Note and discuss this paper
- Consider, decide, issue guidance (as warranted) on this effort
- Consider opportunities (if any) through which the hydrographic community can leverage the S-100 hydrographic data model to support the UN Ocean Decade goal to “protect” 30% of the world’s oceans by 2030.

For additional information: [Julio.Castillo@noaa.gov](mailto:Julio.Castillo@noaa.gov)

Attachment 2

**US-Canada SPI Status:  
Informational for USCHC47  
2024**

The following SPI's<sup>1</sup> are measured by the coastal state, member state or hydrographic office.

| SPI   |                                                                                                                                                                                                                                                                              | Canada                                                                                                                                                                              | US                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1.1 | Percentage of <b>Member States</b> having operationalized production and distribution of hydrographic data products and services based on IHO Universal Hydrographic Data Model (S-100), under an implementation framework of coordination and agreed timelines (2026: 100%) | <p>Yes.</p> <p><i>CA is producing and delivering S-102 in selected areas now and S-111 is available for all of Canada. S-101 ENC's will be available by 1 January 2026.</i></p>     | <p><i>US is on track according to plan to begin producing S-101 ENC's in 2025.</i></p> <p><i><a href="#">"NOAA's S-57 to S-101 ENC Production Transition Plan"</a> (September 2023) will be updated in summer 2024. Initial S-100 products and services will begin in large ports (New York) with the plan to include S-101, S-102,</i></p> <p><i>Please also see Annex to the US National Report to USCHC47 for further details.</i></p> |
| 1.2.2 | Percentage of navigational significant areas (e.g. charted traffic separation schemes, anchorages, channels) for which the adequacy of the hydrographic knowledge is assessed through the use of appropriate quality indicators (2026: 100%) <sup>2</sup>                    | <p><i>CA waters:</i></p> <p><i>77% of navigational significant areas have a CATZOC value other than 'U' (unassessed). This assessment -taken from C-55 – requires revision.</i></p> | <p><i>USA waters:</i></p> <p><i>100% of navigational significant charted areas are CATZOC assessed.</i></p> <p><i>However, using NOAA's "hydro health model" some of these areas should be reassessed via survey to update the CATZOC with more modern survey methods.</i></p>                                                                                                                                                            |
| 1.3.1 | Ability and capability of <b>Member States</b> to meet the requirements and delivery phases of the S-                                                                                                                                                                        | <p>Yes. CA is confident that it will have the capability and the ability by 2026.</p> <p><a href="#">USCHC47 2024 11B EN Rev1 S-100 Interdepartmental</a></p>                       | <p><i>Yes. The US has the ability and capability and will roll out delivery phases in selected locations and regions based on available resources and a prioritization scheme.</i></p>                                                                                                                                                                                                                                                    |

<sup>1</sup> IHO Strategic Plan [https://iho.int/uploads/user/About%20IHO/Strategic%20Plan/IHOSP2021\\_2026\\_final.pdf](https://iho.int/uploads/user/About%20IHO/Strategic%20Plan/IHOSP2021_2026_final.pdf)

<sup>2</sup> Find reference where this was defined to be – having band 3 or better charts for selected areas...

|       |                                                                                                                                                             |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                     |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | 100 implementation plan (2026: 50%) <sup>3</sup>                                                                                                            | <a href="#">Government of Canada Committee.pdf (iho.int)</a>                                                                                                                                                                                                                                                  | <a href="#">PowerPoint Presentation (iho.int)</a>                                                                                                                                                                                                                                                                   |
| 2.2.1 | Percentage of adequately surveyed area per <b>coastal state</b>                                                                                             | <p>CA entry for C-55 is out-of-date (last done in 2019).</p> <p><i>Nationally, 11% of CA waters are adequately surveyed, however, the high proportion of inadequacy surveyed waters is predominately due to the large area of Arctic waters that are un-surveyed or covered by frontier surveys only.</i></p> | <p><i>U.S. entry for C-55 is out-of-date.</i></p> <p><i>As a percent of US waters mapped following the <a href="#">Bathymetric Gap Analysis</a><sup>4</sup> methodology, the calculation for 2024 is 52%.</i></p> <p><i>Of the total US area of 3,590,500 square nautical miles (snm), 52% has been mapped.</i></p> |
|       |                                                                                                                                                             | <i>US and CA are reviewing the C-55 approach for continuity of approach. The results of the review will be forthcoming following discussions at USCHC47 (May 30-31, 2024). Please see C-55 paper USCHC47-16</i>                                                                                               |                                                                                                                                                                                                                                                                                                                     |
| 2.3.1 | Number of <b>HOs</b> <sup>5</sup> reporting success applying the (GGIM) principles in their national contexts (2026: 70%)                                   | Yes. CA = 1 Hydrographic Office                                                                                                                                                                                                                                                                               | Yes. USA=1 Hydrographic Office                                                                                                                                                                                                                                                                                      |
| 3.1.1 | Percentage of <b>Coastal States</b> that are capable to provide marine safety information (MSI) according to the joint IMO/IHO/WMO manual on MSI (2026 90%) | Yes. CA = 1 Hydrographic Office                                                                                                                                                                                                                                                                               | Yes USA=1 Coastal State                                                                                                                                                                                                                                                                                             |

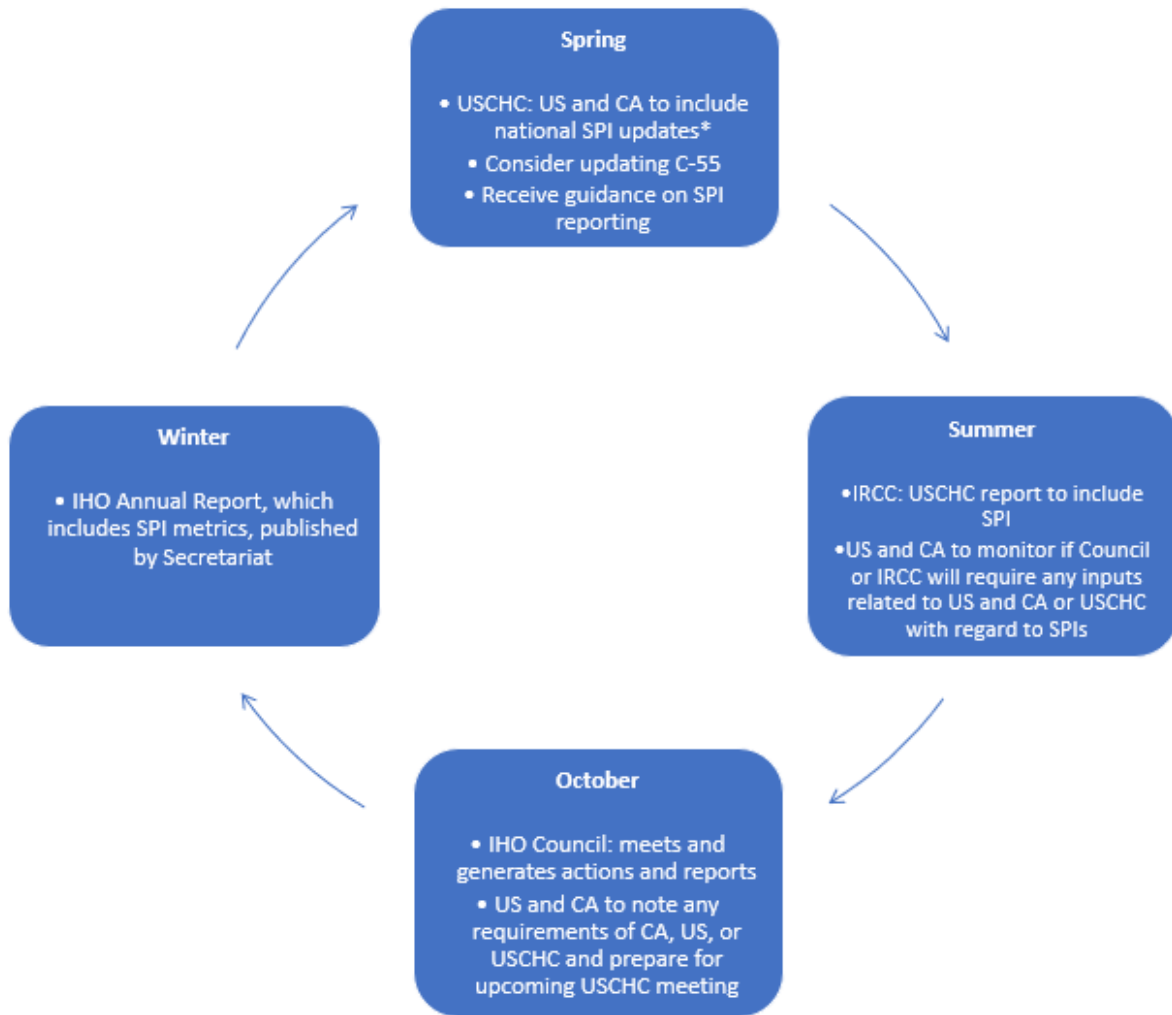
<sup>3</sup> <https://iho.int/en/s-100-implementation-strategy> and Implementation Roadmap at [https://iho.int/uploads/user/About%20IHO/Council/S-100\\_ImplementationStrategy/S100\\_Roadmap\\_Decade\\_v2.1\\_EN\\_3Nov2022.pdf](https://iho.int/uploads/user/About%20IHO/Council/S-100_ImplementationStrategy/S100_Roadmap_Decade_v2.1_EN_3Nov2022.pdf)

<sup>4</sup> <https://iocm.noaa.gov/seabed-2030-bathymetry.html>

<sup>5</sup> For the IHO, we assume there are 98 HOs with each member state having one HO. This will be helpful to generating a global percentage.

# USCHC Strategic Plan Reporting Cycle

Draft as of May 2024



USCHC POCs for monitoring and reporting SPIs:

- Name and email
- Name and email

\* IHO SPIs: 1.1.1, 1.2.2, 1.3.1, 2.2.1, 2.3.1, and 3.1.1

## S-100 Coordinator Responsibilities for USCHC

### Terms of Reference

Developed and updated as of May 2025

|                         |                           |                                                                              |
|-------------------------|---------------------------|------------------------------------------------------------------------------|
| USCHC focal point       | ??                        |                                                                              |
| CA national focal point | Louis Maltais             | <a href="mailto:Louis.Maltais@dfo-mpo.gc.ca">Louis.Maltais@dfo-mpo.gc.ca</a> |
| US national focal point | Christie Ence (2023-2024) | <a href="mailto:Christie.Ence@noaa.gov">Christie.Ence@noaa.gov</a>           |
|                         | Sean Legeer ((2024- )     | <a href="mailto:Sean.Legeer@noaa.gov">Sean.Legeer@noaa.gov</a>               |

|                         |                                                                             |                                                                                                                                                                                                                                                        |
|-------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S-101 and S-102         |                                                                             |                                                                                                                                                                                                                                                        |
| CA national focal point | Laura Colombe (S-101)<br>Gabriel Cavanaugh (S-101)<br>Andrew Robert (S-102) | <a href="mailto:Laura.Colombe@dfo-mpo.gc.ca">Laura.Colombe@dfo-mpo.gc.ca</a><br><a href="mailto:Gabriel.Cavanaugh@dfo-mpo.gc.ca">Gabriel.Cavanaugh@dfo-mpo.gc.ca</a><br><a href="mailto:Andrew.Roberts@dfo-mpo.gc.ca">Andrew.Roberts@dfo-mpo.gc.ca</a> |
| US national focal point | Christie Ence (2023-2024)                                                   | <a href="mailto:Christie.Ence@noaa.gov">Christie.Ence@noaa.gov</a>                                                                                                                                                                                     |

This document serves as a reference point and living document for scoping the responsibilities of the USCHC S-100 coordinator.

The responsibilities checklist below was developed by the WEND WG chair (2021-2023) Dr. John Nyberg and shared USCHCs initial discussion of this position at USCHC46 (2023).

#### Responsibilities:

- Keep an inventory of S-100 products in the region
  - Producer
  - Status, in progress, complete, availability
  - Potential additional producers of product
- Work to ensure that Regional MS understand what S-100 products are available
- Update the WEND Matrix on an annual basis
- Report regional S100 status to WENDWG
- Provide input to the WENDWG on RHC preferences regarding WEND 100 Principles
- Help to communicate latest “WEND 100 Principle” updates to RHC
- Work to coordinate new S-100 products according to WEND 100 Principles (as they are developed), following overlap, distribution and other guidance as it is agreed
- PROPOSED Update and maintain the S-100 Status Annex in the US and CA National Reports to USCHC



Reference:

- List of responsibilities shared by email from John Nyberg to Jonathan Justi and Doug Brunt (March 17, 2023)
- Designated S-101 and S-102 focal points were identified following USCHC46
- USCHC47: US focal point will change from Christie Ence to Sean Legeer.