

**Minutes of the 34<sup>th</sup> Meeting of the  
International Hydrographic Organization**



**United-States-Canada Hydrographic Commission**



Tampa, Florida  
United States  
May 25, 2011

**Co-Chairs**

CAPT John E. Lowell, Jr., NOAA  
Director, Office of Coast Survey (OCS)  
National Oceanic and Atmospheric  
Administration (NOAA)

Dr. Savithri Narayanan  
Director General, Dominion Hydrographer  
Canadian Hydrographic Service (CHS)  
Fisheries & Oceans Canada

**1. Introductions and Welcoming Remarks**

J. Lowell and S. Narayanan jointly welcomed the group.

Members of the group introduced themselves. A list of meeting participants is provided in Annex A.

**2. Review and Adopt Agenda**

The agenda for the 34<sup>th</sup> Meeting of the U.S.–Canada Hydrographic Commission (USCHC) was reviewed and approved. The agenda is provided in Annex B.

**3. Review of Outstanding Items from the 33<sup>rd</sup> USCHC and the Results of the Charting Advisory Committee (CAC) Meeting**

K. Ries detailed the results of the CAC Conference Call (April 11, 2011):

- U.S. –Canada Transboundary Electronic Nautical Chart (ENC) & Level of Services (LOS) Arrangement have been recommended for approval and signing.

- There has been official communication (WEND-WG CL 1/2011) from the chairman of WEND Working Group, CAPT Jamie McMichael-Phillips (UKHO), relating to gaps in ENC Coverage.
- The USCHC agreed to submit one report to both the WEND Working Group and the IRCC.
- All actions of the CAC meeting are addressed and reflected in the 34 USCHC agenda.

#### 4. Organizational Update and New Agency Initiatives

##### a. Canadian Hydrographic Office

S. Narayanan, the Canadian Dominion Hydrographer, provided an update of the organizational structure of Fisheries and Oceans Canada as relevant to the Canadian Hydrographic Service (CHS). Dr. Siddika Mithani is the Assistant Deputy Minister, Oceans and Science, Fisheries and Oceans Canada (DFO). Julian Goodyear has retired as the UNCLOS Project Director with Steve Forbes succeeding him. Michel Goguen has been appointed as the Director CHS Atlantic Region stationed at the Bedford Institute of Oceanography, Halifax.

CHS is undertaking an Arctic pilot initiative beginning in 2011 to bring together several different agencies and technologies to a common hydrographic data collection effort. Data collection will be undertaken through AUVs, marine LIDAR, satellite technology, plus traditional launch and ship sounding platforms. This scale of hydrographic data collection collaboration for CHS charting has not been attempted before and hopefully some good lessons will be learned. J. Lowell requested a copy of any report from the project, if available.

**ACTION 1: S. Narayanan to share any appropriate lessons learned from the Arctic pilot project initiative.**

##### b. Office of Coast Survey

J. Lowell, the U.S. National Hydrographer and Director of the Office of Coast Survey, provided updates to the organizational structure of NOAA that are relevant to OCS (Annex E). There is now a vacancy in the Integrated Ocean and Coastal Mapping (IOCM) program of OCS due to the recent passing of Roger Parsons. Howard Danley is retiring as Chief of the Navigation Services Division (NSD) as of May 3<sup>rd</sup>. Options for backfilling this position are being explored. In the meantime, CDR Larry Krepp will be the acting Chief of NSD. The Deputy Undersecretary for Oceans and Atmosphere, NOAA Administrator Dr. Lubchenco is reducing many NOAA Corps officer billets in an effort to streamline the organization. As a result, the number of NOAA Commissioned Corps Officers available to fill positions is decreasing. David Kennedy has been officially appointed Assistant Administrator of the National Ocean Service (NOS). Dr. Holly Bamford has also been appointed recently as Deputy Assistant Administrator of NOS.

OCS is conducting an internal review of its organizational structure. There will be a slight transfer of duties among divisions and staff. A new Customer Requirements Group has been formed to look at how products are managed throughout the entire project life cycle.

c. National Geospatial-Intelligence Agency – Maritime

C. Andreasen provided an organizational chart detailing the structure of the NGA GEOINT Group and reviewed the current status of the relocation of NGA to a new facility.

d. U.S. Navy

B. Connon updated the participants on the status of the Navy's fleet of hydrographic ships and field units. The new gondola sonar mount that has been installed is helping to reduce fuel costs by 15%. All six ships will be upgraded by the end of next year. The USNS Maury was built from a slight change to the T-AGS 60 design. It is longer, has a moon pool, and more personnel. The new Sea-Arks for the Fleet Survey Team can be put on C-130s.

## 5. Transboundary ENC Project Report and Discussion

J. Powell presented the results of the Transboundary ENC Pilot Project on the Pacific Coast whereby Canada and United States have harmonized their ENC coverage to eliminate overlapping coverage. This was a multi-year effort to resolve several technical and policy issues including managing portrayal of unresolved international boundaries, handling of Canada's requirement for French and English language requirements, the sharing of data and files across different cartographic production environments, ENC updating protocols, intellectual property rights, ENC scheming to fit mariners needs rather than sovereignty needs given the international border transits through a vessel traffic scheme, management of ENC coding and finally, coordination of communication and distribution plans.

D. Pelletier spoke about the communications framework that was developed in conjunction with OCS (H. Danley, and M. Kroll) to inform stakeholders. This framework included a 90 day advance notice through several communication channels. Actions pending from Communication Plans are as follows:

**ACTION 2: D. Pelletier to publish initial notice of intent for Notice to Mariner and web announcement (Due: July 2, 2011).**

**ACTION 3: M. Kroll to finalize an enhanced web announcement, including before and after graphics, distribution details and Q&As (Due: August 1, 2011).**

**ACTION 4: D. Pelletier to finalize communiqué with Internal Government stakeholders (Due: September 2, 2011).**

**ACTION 5: M. Kroll to finalize stakeholder messaging, including distributors, dealers, VARs, pilots, etc. (Due September 2, 2011).**

**ACTION 6: D. Pelletier to finalize messages to users, such as boaters, mariners, registered users, commercial mariners & fishermen, pilots, port authorities, etc. (Due September 2, 2011).**

**ACTION 7: CHS & OCS to publish Notices to Mariners (Due September 2, 2011).**

Before proceeding to the next phase, it will be important to determine the effectiveness of the communication plan by soliciting feedback from stakeholders and completing Quality Assurance activities. Lessons learned will be used to improve subsequent communication plans.

A coordinated release of the Pacific region Transboundary ENC's is set for December 2011. A systematic approach to applying the best practices learned on the Pacific coast Transboundary pilot will be used to subsequently address ENC harmonization in other boundary areas.

J. Lowell suggested the USCHC summarize at a high-level the experiences learned from the Transboundary Project in order to share this at the IRCC discussions.

Next steps and timeline for completing collaborative scheming of ENC's in all United States-Canada Transboundary waters was discussed. It was agreed that the area of Dixon Entrance in the northwest Pacific along the border of Alaska and British Columbia would be the next phase.

**ACTION 8: CAC to initiate discussions between CHS-Pacific Region and OCS to establish preliminary proposals for USCHC approval. Target date for completion and release of cooperative ENC coverage in Pacific coast transboundary waters is March 2012.**

**ACTION 9: CAPT Lowell to report on the successful conclusion of the USCHC Transboundary ENC demonstration project and distribute a Transboundary Project lessons-learned report to the IRCC-3 meeting to be held in Niteroi, Brazil, May 26-27, 2011.**

## **6. Cooperative Level of Service Arrangement for Charting Products**

J. Powell presented the Cooperative Level of Service LOS Arrangement which outlines the operational levels of service between CHS and OCS concerning Transboundary ENC's. This document ensures quality management and provides a clear mutual understanding of the expectations for both hydrographic offices. The LOS may be revised and amended as needed.

## 7. USCHC Report to the IRCC and WEND Working Group

K. Ries introduced the topics of the USCHC's Report to the IRCC-3 and response to the WEND Working Group. Participants agreed that one document will be drafted for both groups and that the report should highlight areas in the region currently lacking adequate ENC coverage, such as the Arctic. Although the Arctic lacks adequate coverage, it is not yet heavily trafficked.

J. Lowell will represent the USCHC at the IRCC and will state with mutual consent that there is adequate coverage in the region for existing patterns of SOLAS international voyages. A detailed report will be provided to the WENDWG on USCHC ENC coverage.

K. Ries stated that the Chair of the WEND Working Group has requested each Regional Hydrographic Commission present a set of graphics detailing the regional status of ENC coverage. OCS and CHS graphics will address and update the information produced by the UKHO.

**ACTION 10: OCS and CHS to develop graphical representations of geographic ENC coverage for the WEND.**

S. Hinds discussed the results of the test ENC update demonstration project. The U.S. and Canada created duplicate cells in the selected transboundary region, with the exception that Canada's cells also included French text in the National Text (NTXTDS) object. The ECDIS' performed flawlessly loading and displaying the ENCs. The small sample size of three ECDIS' offered sufficient confidence for OCS and CHS to continue with ENC updates. One lesson learned from this demonstration was that the ECDIS' were inconsistent in how they handled and displayed the NTXTDS object. This information was passed to the IHO.

B. Connon raised the issue of updating the IHO C-55, "Status of Hydrographic Surveying and Nautical Cartography Worldwide". It was agreed that this requirement is not easily met given the level of detail but respect its requirements.

**ACTION 11: OCS and CHS to take note of the need to maintain C-55 information and to share any best practice in how this reporting system can be improved.**

## 8. Arctic Regional Hydrographic Commission

S. Hinds discussed the USCHC's feedback on the Arctic boundaries and the use of NAVAREAS. The Arctic Regional Hydrographic Commission (ARHC) shares boundaries with the Nordic, North Sea, and US-Canada hydrographic commissions.

It was agreed to submit an USCHC exclusion statement to ARHC on the NAVAREAS as ARHC coverage to avoid misunderstanding and increase clarification as follows:

*The United States – Canada Hydrographic Commission (USCHC) approve the adoption of the five new Arctic NAVAREAS XVII – XXI as the area of coverage for the Arctic Regional Hydrographic Commission. The USCHC wishes to note on the record that this*

*ARHC coverage excludes specific geographical maritime areas that border on these Arctic NAVAREAS specifically, the Bering Strait, Hudson Strait, Hudson Bay and the southern portion of Baffin Island and Davis Strait.*

Denmark has agreed and been approved to represent the ARHC at the IRCC-3.

## 9. Information Items

### a. S-101

J. Powell presented the status of the S-101. S-101 is a four-phased project to manage the development of the next-generation ENC product specification. Phase 1 has completed. Phase 2 is beginning and will enhance data loading mechanisms and finalize the portrayal model. Phase 3 will deal with cartographic attributes. Phase 4 is the product finalization stage and will take place at the end of 2012. S-101 should not be released and utilized until it is properly tested. NOAA & ESRI created an open source data converter which will convert any S-57 data into S-101. This will likely be highly welcomed by member states that cannot currently create their own S-101 data.

C. Andreasen suggested that this should be a US presentation at the April 2012 International Hydrographic Conference (IHC).

**ACTION 12: OCS to explore a S-101 presentation to the 2012 IHC and communicate any recommendations to CHS.**

### b. S-102

W. Ladner and A. Bolduc presented on the status of IHO S-102 developments, which began in 2009 with a proposal from Canada and United States to TSMAD. A reviewed S-102 document (Edition 1, March 2011) was tabled at TSMAD22 in April 2011. Test data will be accessible for tests and trial purposes.

A. Bolduc stated that the collaboration with the U.S. has been fruitful and should continue.

## **10. Other Business**

### a. Joint U.S.-Canada Arctic Mapping

A. Armstrong presented the status of the Joint U.S.-Canada Arctic Mapping Project. In 2010, the USCGC Cutter *Healy* acquired bathymetric data, while the CCGS *Louis S. St-Laurent* conducted seismic profiling. The joint 2011 cruise, scheduled for mid-August to late-September, will likely be the last one at which time the U.S. and Canada will have completed the process of collecting and sharing information of common interest.

S. Narayanan hopes that there will be more collaboration between the U.S. and Canada for other Arctic projects.

### b. Service Hydrographique et Océanographique de la Marine (SHOM)

C. Roux presented on the structure and mission of SHOM. SHOM has 4 ships, and is responsible for an area that encompasses 11 million km<sup>2</sup>. SHOM is also the coordinator of NAVAREA 2. The three core missions of SHOM are Hydrographic, Defense, and Support to Maritime Policy (such as sea-level rise, coastal management, and the tsunami warning system.)

S. Narayanan stated that Canada and the French Hydrographic Office will continue to advance discussions on possible staff exchanges.

### c. Land Information New Zealand (LINZ)

A. Greenland, Hydrographer of New Zealand, participated as an Observer to the USCHC meeting and provided a brief description of the structure and work of LINZ. LINZ maintains a suite of 80 ENCs, has a permanent staff of 14, and is the coordinator of NAVAREA 14. All survey operations are outsourced. LINZ also maintains and operates a tsunami warning system.

The Shallow Survey 2012 Conference ([www.conference.co.nz/shallowsurvey](http://www.conference.co.nz/shallowsurvey)) will be held in Wellington, NZ in February.

J. White asked if NZ has experienced any bathymetric changes due to the February 2011 Christchurch earthquake.

A. Greenland replied that a test project was completed and no changes were observed.

## **11. Signing of Approved Documentation**

S. Narayanan and J. Lowell signed the Transboundary ENC Project Report and the Cooperative Level of Service Arrangement for Charting Products.

S. Narayanan and B. Frachon signed the "LETTER OF INTENT - Canadian Hydrographic Service (CHS) – Service Hydrographique et Océanographique de la Marine (SHOM) - Staff Exchange" during the meeting.

**12. Final Remarks**

J. Lowell and S. Narayanan provided closing remarks. The next USCHC meeting will be hosted by the Canadian Hydrographic Service in 2012 at a date and time to be announced.

**13. Conclusion**

J. Lowell adjourned the Commission meeting.



**34<sup>th</sup> Meeting of the  
International Hydrographic Organization**



**United-States-Canada Hydrographic Commission**



Tampa, Florida  
United States  
May 25, 2011

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**International Hydrographic Organization  
United States - Canada Hydrographic Commission**



**34<sup>th</sup> United States-Canada Hydrographic Commission**

Meeting Agenda

April 25, 2011

8:00 a.m. – 12:00 p.m. EST

**Meeting Location**

Marriott Tampa Waterside  
Conference Room 3  
700 South Florida Avenue  
Tampa, Florida 33602  
Telephone: 813-264-6325

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|--|------------------|
| 1. Introductions and welcome   | Lowell/Narayanan |
| 2. Review and Adopt Agenda   | Lowell           |
| 3. Review Outstanding Items from 33 <sup>rd</sup> USCHC and Results of Charting Advisory Committee (CAC) | Ries/Pelletier   |
| 4. Organizational Update and New Agency Initiatives  |                  |
| a. Canadian Hydrographic Service   | Narayanan        |
| b. Office of Coast Survey  | Lowell           |
| c. National Geospatial Intelligence Agency- Maritime   | Andreasen        |
| d. U.S. Navy   | Connon           |
| 5. Transboundary ENC Project Report and Discussion   | Powell/Hinds     |
| 6. Cooperative Level of Service Arrangement for Charting Products  | Powell/Hinds     |
| 7. USCHC Report to the IRCC and WEND Working Group   | Ries             |
| a. Review and Discuss  |                  |
| 8. Arctic Regional Hydrographic Commission   | Hinds            |

- a. Boundary Feedback (use of Nav Area) from USCHC
- 9. Information Items
  - \*S101 Powell
  - \*S102 Cannon/Ladner/Bolduc
- 10. Other Business
- 11. Signing of Approved Documentation
  - a. ENC Transboundary Report Lowell/Narayanan
  - b. Level of Service Arrangement
- 12. Final Remarks
  - a. Dinner Plans (University Club of Tampa) Lowell
- 13. Conclusion

## 34<sup>th</sup> Meeting of the International Hydrographic Organization



### United-States-Canada Hydrographic Commission



Tampa, Florida  
United States  
May 25, 2011

### List of Actions

Action Number	Description	Assigned To	Due Date
USCHC 34.01	Share any appropriate lessons learned from the Arctic pilot project initiative	<u>S. Narayanan</u>	5/2011
USCHC 34.2	Publish initial notice of intent for Notice to Mariner and web announcement (Transboundary Communication Plan)	<u>D. Pelletier</u>	7/2/2011
USCHC 34.3	Finalize an enhanced web announcement, including before and after graphics, distribution details and Q&As (Transboundary Communication Plan)	<u>M. Kroll</u>	8/1/2011
USCHC 34.4	Finalize communiqué with Internal Government stakeholders (Transboundary Communication Plan)	<u>D. Pelletier</u>	9/2/2011
USCHC 34.5	Finalize stakeholder messaging, including distributors, dealers, VARs, pilots, etc. (Transboundary Communication Plan)	<u>M. Kroll</u>	9/2/2011
USCHC 34.6	Finalize messages to users, such as boaters, mariners, registered users, commercial mariners & fishermen, pilots, port authorities, etc. (Transboundary Communication Plan)	<u>D. Pelletier</u>	9/2/2011
USCHC 34.7	Publish Notices to Mariners (Transboundary Communication Plan)	<u>CHS &amp; OCS</u>	9/2/2011
USCHC 34.8	Initiate discussions between CHS-Pacific Region	<u>USCHC CAC</u>	3/2012

	and OCS to establish preliminary proposals for USCHC approval. Target date for completion and release of cooperative ENC coverage in Pacific coast transboundary waters is March 2012.		
USCHC 34.9	Report on the successful conclusion of the USCHC Transboundary ENC demonstration project and distribute a Transboundary Project lessons-learned report to the IRCC-3 meeting to be held in Niteroi, Brazil, May 26-27, 2011.	<u>J. Lowell</u>	5/2011
USCHC 34.10	Develop graphical representations of geographic ENC coverage for the WEND.	<u>OCS and CHS</u>	10/2011
USCHC 34.11	Take note of the need to maintain C-55 information and to share any best practice in how this reporting system can be improved.	<u>OCS and CHS</u>	4/2011
USCHC 34.12	Explore a S-101 presentation to the 2012 IHC and communicate any recommendations to CHS.	<u>OCS</u>	8/2011