

Eliminating ENC Overlaps USCHC Case Study

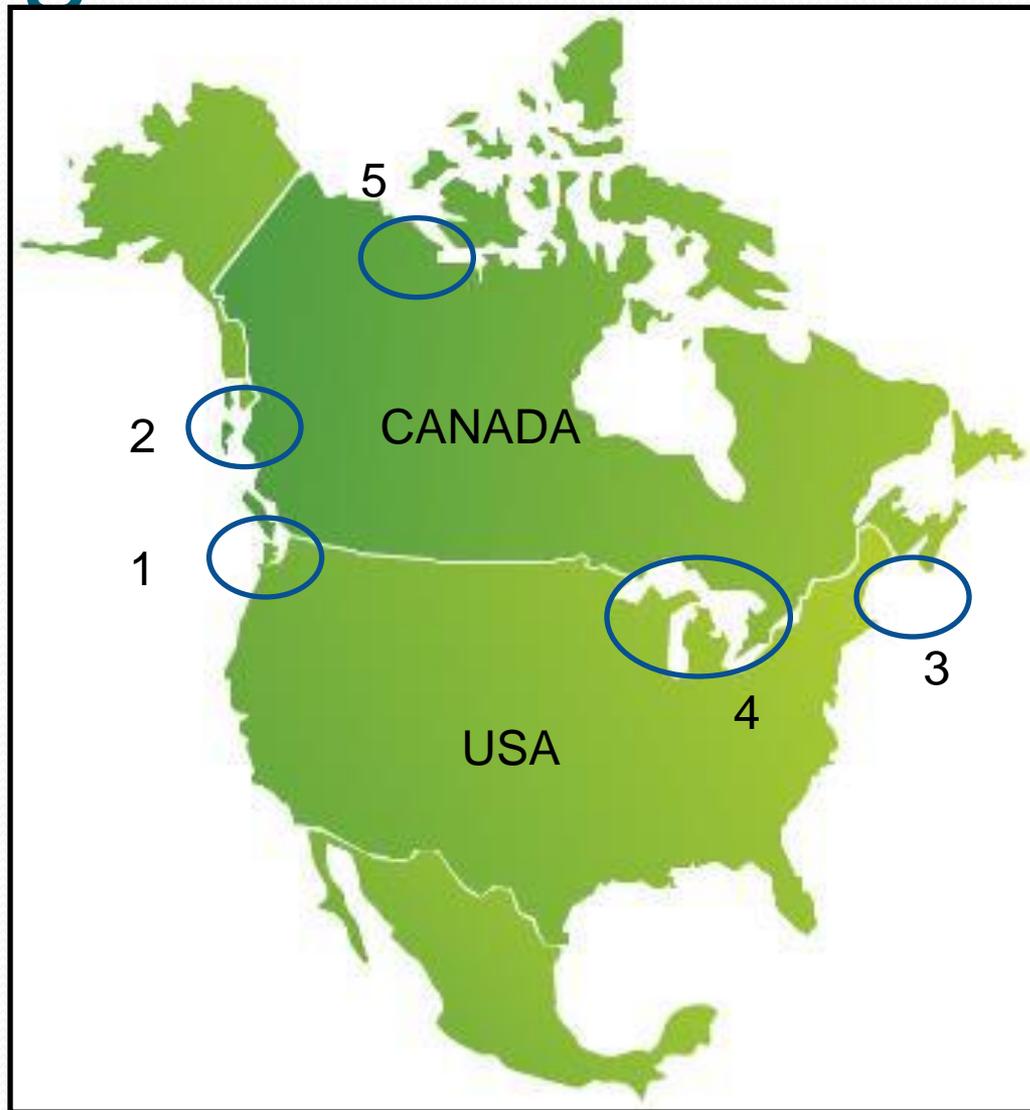
WENDWG5 – Agenda Item WWG5-05B
March 3-5 2015



Overview

- The IHO's Revised WEND Principles (1/1997 as amended) state:
 - *ENC duplication should be avoided. Only one country should be responsible for ENC production in any given area.*
 - *Responsibility for the production of ENCs can be delegated in whole or in part by a country to another country, which then becomes the producing country in the considered area.*
 - *When the production limits are the official limits for national jurisdiction waters, commercial rights shall belong to the ENC producing country.*
- The USCHC has worked for several years to harmonize its ENC coverage and this presentation will share the experiences that were encountered in this effort

Target Areas of ENC Overlap



1. Juan de Fuca Strait
2. Dixon Entrance
3. Gulf of Maine
4. Great Lakes
5. Beaufort Sea

Magnitude of Overlaps

Band	Number of US produced ENC's affected	Number of Canadian Produced ENC's affected
1	1	2
2	6	12
3	11	10
4	8	16
5	10	17
6	1	0
Total	37	57

The USCHC identified a total of 94 ENC's affected by overlaps in six scale bands.

Challenges, Practices, Lessons Learned

- Navigational Purpose – Usage Band Differences
- Unique language requirements
- National Boundaries – Cartographic Boundaries
- Flexibility in Usage Bands
- Reconciling Reduced National Coverage
- Commercial Rights / Intellectual Property
- Client Outreach and Feedback
- Sustainability and ENC Maintenance
 - ENC portfolio modification and integration

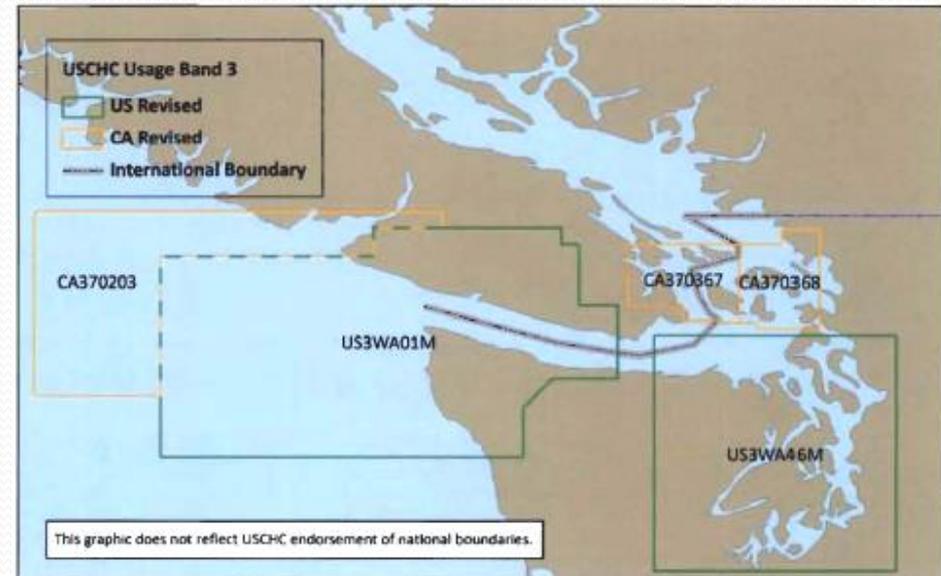
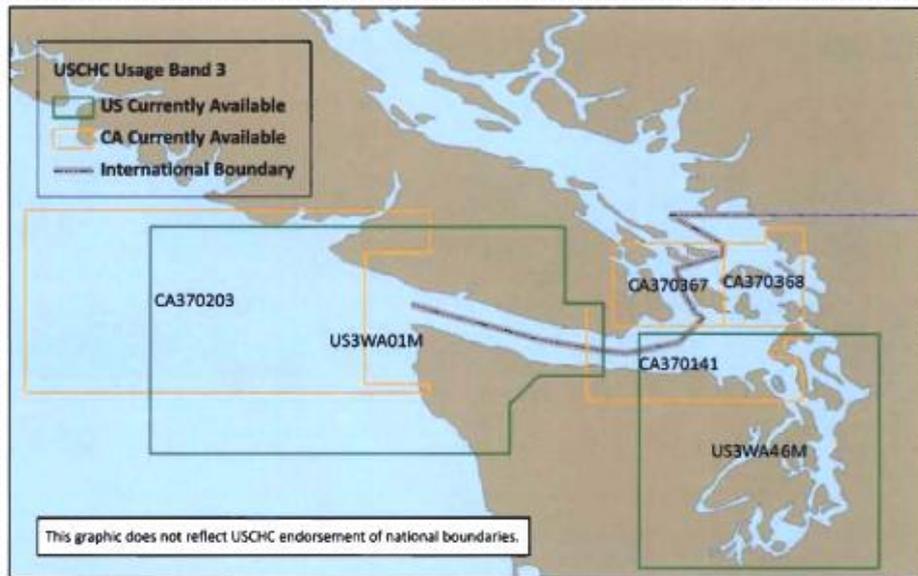
Note – Policy decisions \geq technical effort

Unique Language Requirements

- Canada's Official Languages Act require official navigational products to be both English and French
- United States products are English only
- USA agreed to incorporate French text
 - Canada provide copy-ready French translations
 - US would not QC the content
- Codified in a 'Coding Guide for Transboundary ENCs agreement

National Boundaries – Cartographic Licence

- Mariner Needs Considered Over National Boundaries



This area is disputed by the United States and Canada

National Boundaries – Cartographic License

Feature Information

Name: <NO LABEL>

Feature Type: Marine Info Area

Geometry: 86 vertices, 1 island(s), Perimeter: 194.89 km, Area: 756.41 sq km, Island Area: 0.001167 sq km, Bounds: (-133.1147956000, 54.3638520000, -131.664393000, 54.5000000000)

Map Name: CA370190.000 [Scale 1:100000] [Index in Layer: 956]

Description: Caution area

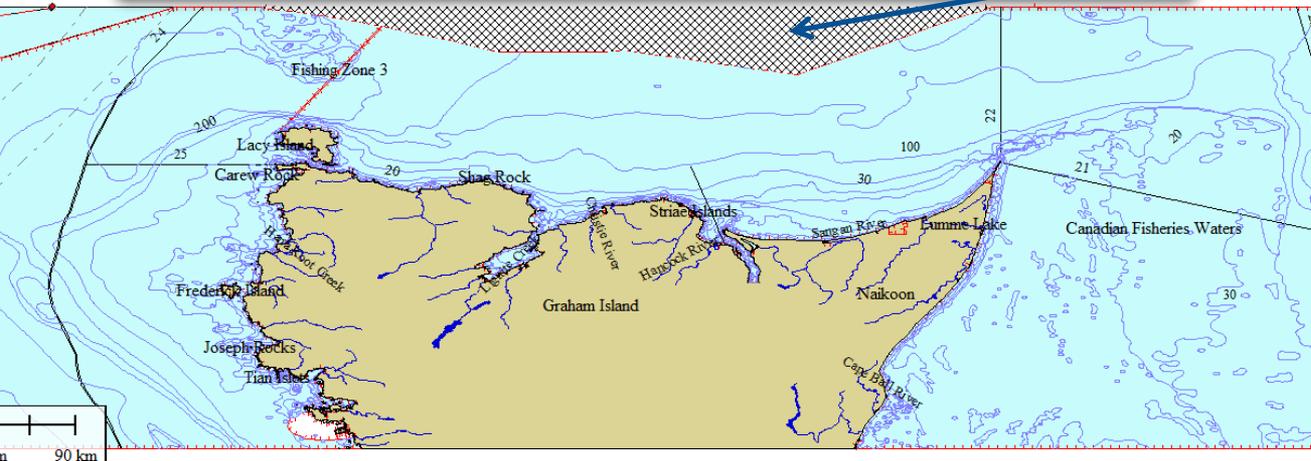
Right click on an entry for more options (i.e. open URL, etc.)

Attribute	Value
FCID	3246
PRIM	3
GRUP	2
OBJL	27
RVER	1
AGEN	50
FIDN	1192800
FIDS	20000
INFORM - Information	
NINFOM - Information in national language	
SCAMIN - Scale minimum	

This area is disputed by United States and Canada.
Cette zone est l'objet d'un désaccord entre les États-Unis et le Canada.

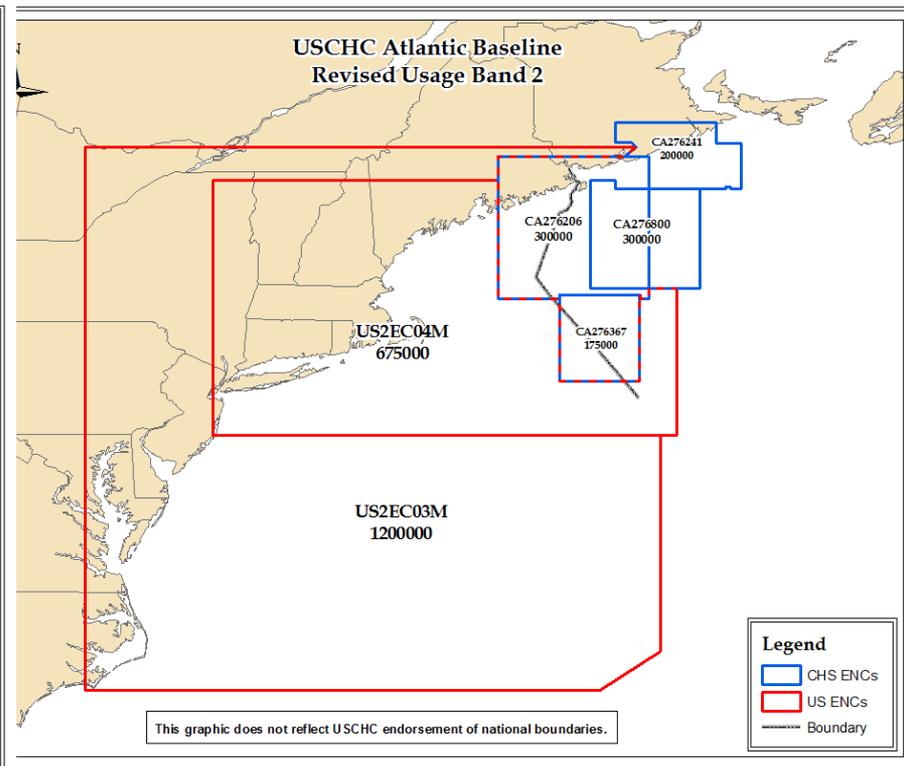
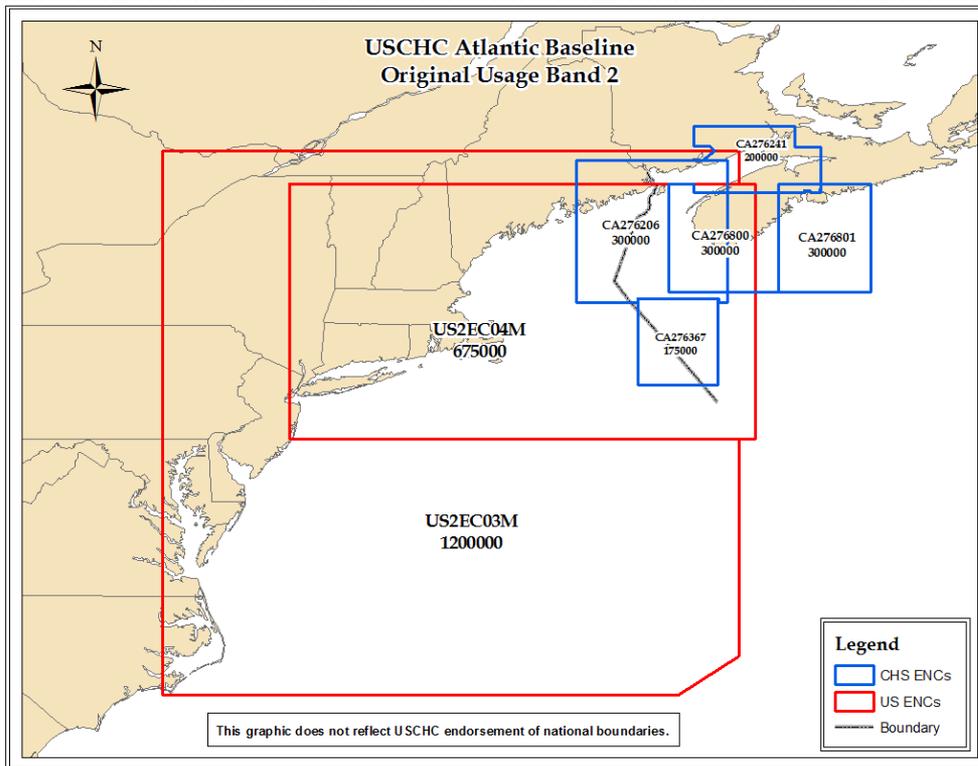
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Canada ENC
CA370190
showing
disputed area
and the
associated
note found in
the information
fields within
ENC



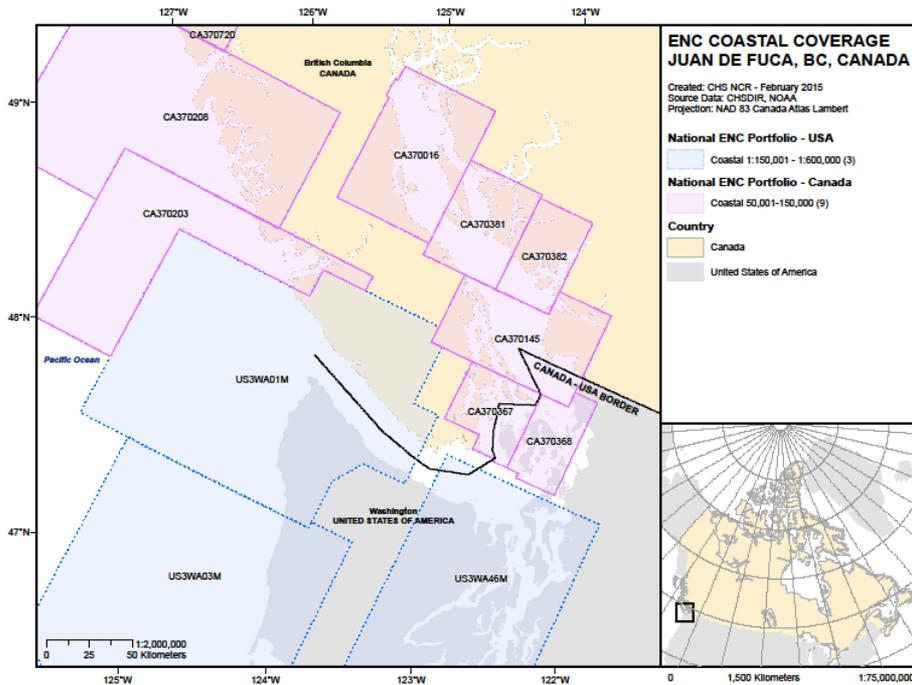
Reduced National Coverage

- Nations Agree to accept Official Coverage of Another Nation

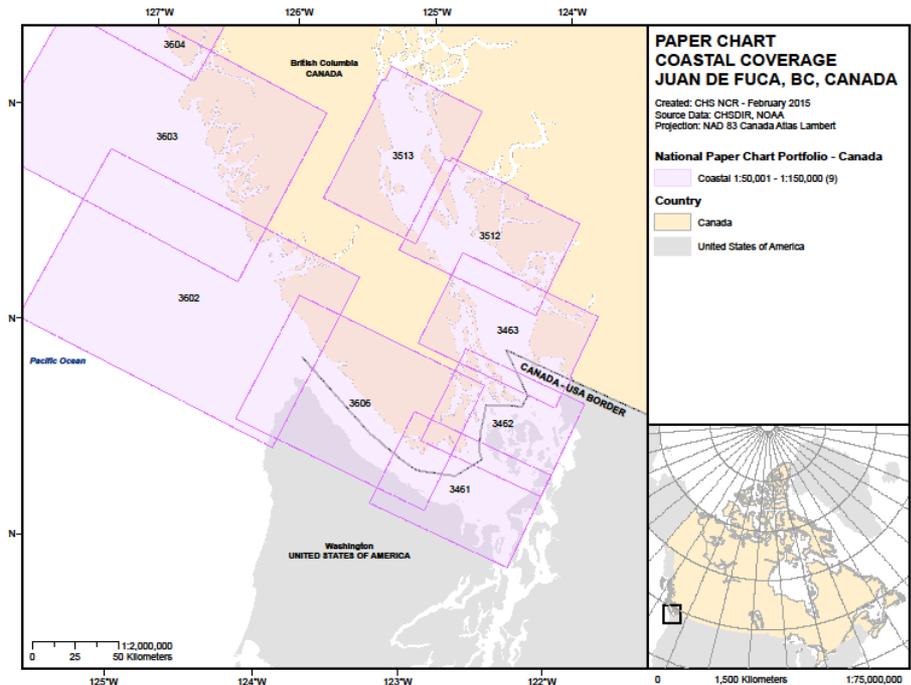


Reduced National Coverage – A Canada Case

- ENC coverage by a Member State begins to diverge from its Paper Chart portfolio



CHS ENC Coverage-Magenta



CHS Paper Chart Coverage-Magenta

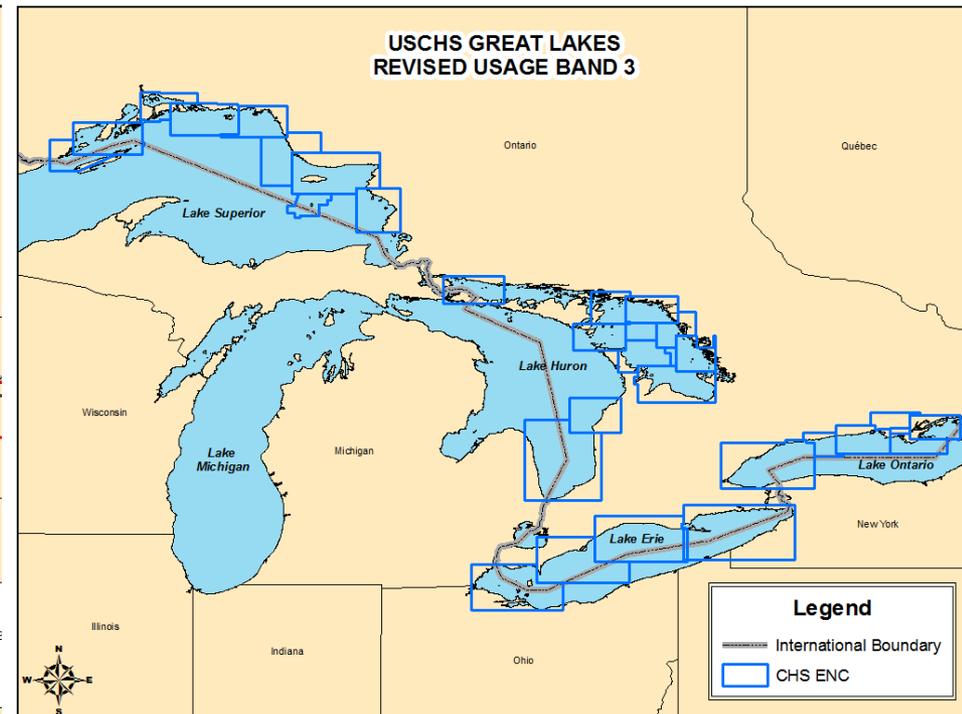
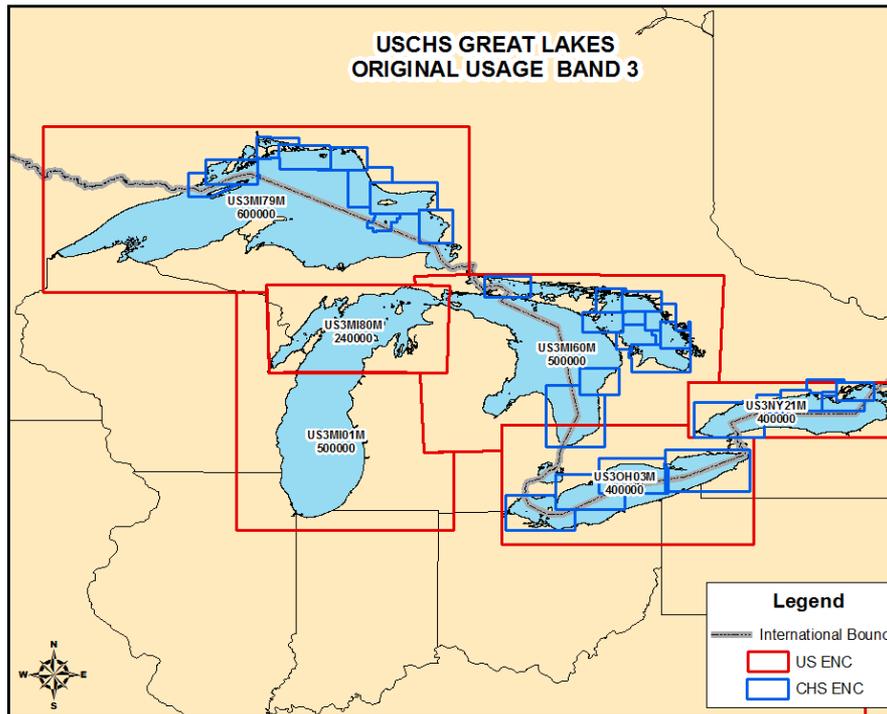
Flexibility in Usage Bands

- Canada and US had established their usage bands ranges before they were defined by the S-57 Standard

Navigational Purpose	Code	NOAA Scale Ranges	CHS Scale Ranges	IHO Recommended Scale Ranges
Berthing	6	<1:5,000	1<1:2,000	<1:4,000
Harbor	5	1:5,001-1:50,000	1:2,001-1:20,000	1:4,001-1:21,999
Approach	4	1:50,001-1:150,000	1:20,001-1:50,000	1:22,000-1:89,999
Coastal	3	1:150,001-1:600,000	1:50,001-1:150,000	1:90,000-1:349,999
General	2	1:600,001-1:1,500,000	1:150,001-1:500,000	1:350,000-1:1,499,999
Overview	1	>1:1,500,001	>1:500,001	>1:1,500,000

Flexibility in Usage Bands

- US agreed to shift ENC at scales between 1:240K and 1:600K to UB2 where Canada and US had more similar scale ranges and thus improve navigation product coverage for mariners



Commercial Rights & Intellectual Property

- Each USCHC MS has full rights and responsibility for distribution (commercial rights) of Transboundary ENC's which it produces
- Intellectual Property Rights were encoded into ENC's:

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Client Outreach and Sustainability

- A mutually agreed upon communication plan was developed to include a web notice presence plus a direct communique to selected user groups
- A Level of Service Agreement for data exchange was developed and this remains evergreen for updates as found appropriate

Continued Communication

- Due to changing schemes, occasionally issue new ENC's with an overlap
- Work bi-laterally within the established framework to resolve the issue
 - Currently have three areas of minor overlap

Conclusions

- USCHC gained valuable technical and policy experience while resolving its ENC overlaps
- Member States may benefit from experience of others
- No existing IHO repository for the documenting RHC achievements in resolving ENC Overlaps
- **Recommendation 1:** Note the Best Practices document by USCHC for resolving ENC overlaps
- **Recommendation 2:** Agree to establish a document repository on the WENDWG webpage and invite MS' to document and submit their achievements in resolving ENC overlaps in their region.



Questions?