ARHC2-04D INF1

#### STATUS OF ARCTIC OCEAN NAUTICAL CHART COVERAGE

## Produced by the ARCTIC REGIONAL HYDROGRAPHIC COMMISSION

Presented Copenhagen, Denmark, September 28-29, 2011

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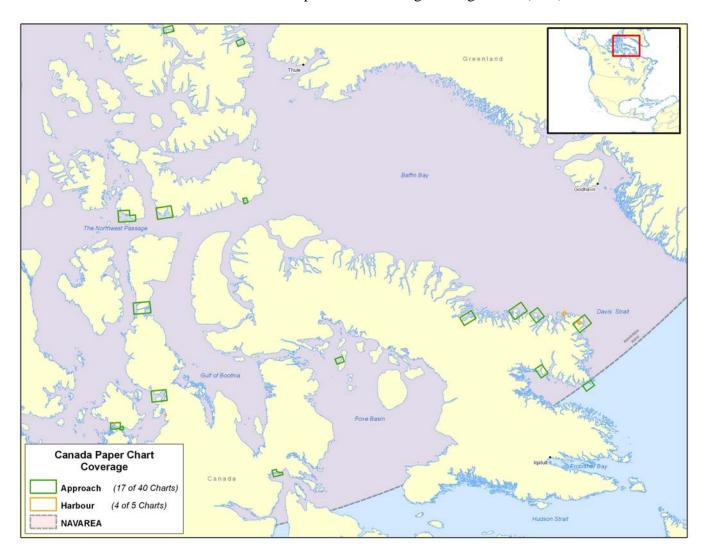
ORTH ATLANTIC Alaska (U.S.A) Canada Paper Chart Coverage Overview (5 Charts) (53 Charts) (42 Charts) Coastal NAVAREA

CHAPTER 1: Canada Paper Chart Coverage – Small

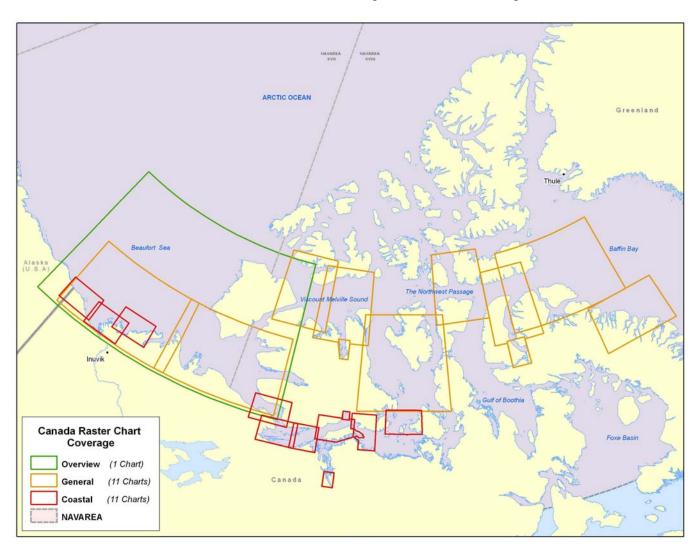
ARCTIC OCEAN Beaufort Sea Alaska (U.S.A) Viscount Melville Sound Canada Canada Paper Chart Coverage Approach (23 of 40 Charts) Harbour (1 of 5 Charts) NAVAREA

Chapter 1: Canada Paper Chart Coverage – Large Scale (west)

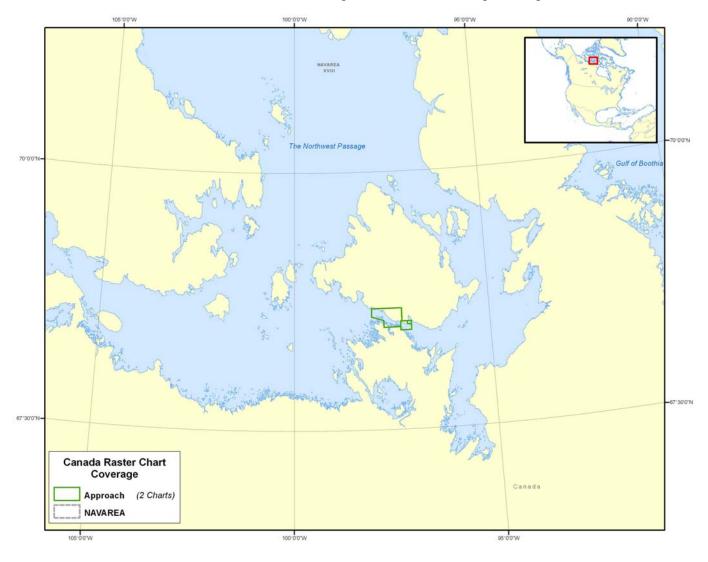
CHAPTER 1: Canada Paper Chart Coverage – Large Scale (East)



CHAPTER 1: Canada Raster Navigational Chart Coverage – Small Scale



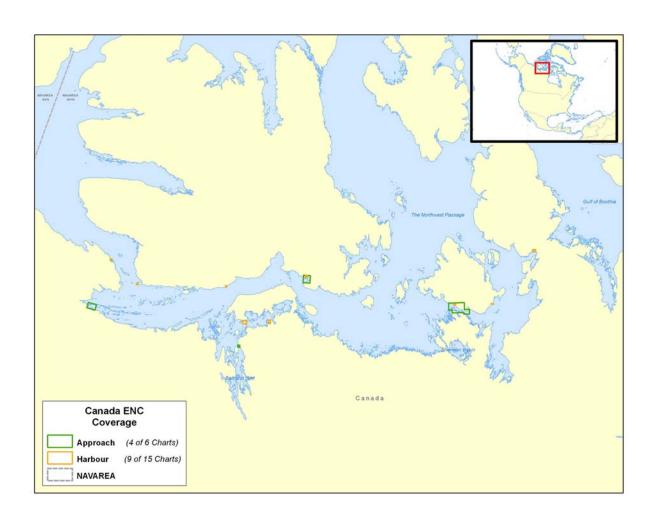
CHAPTER 1: Canada Raster Navigational Chart Coverage – Large Scale



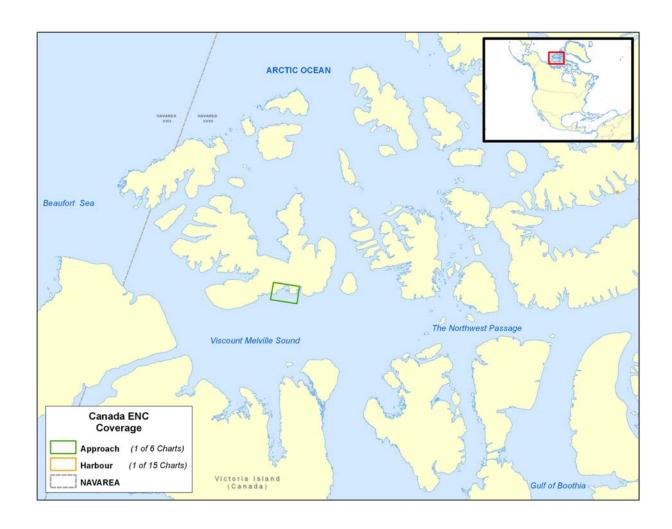
ARCTIC OCEAN Greenland Alaska (U.S.A.) Foxe Basin Canada ENC Coverage Overview (8 Charts) General (16 Charts) Coastal NAVAREA

CHAPTER 1: Canada Electronic Navigational Chart Coverage – Small Scale

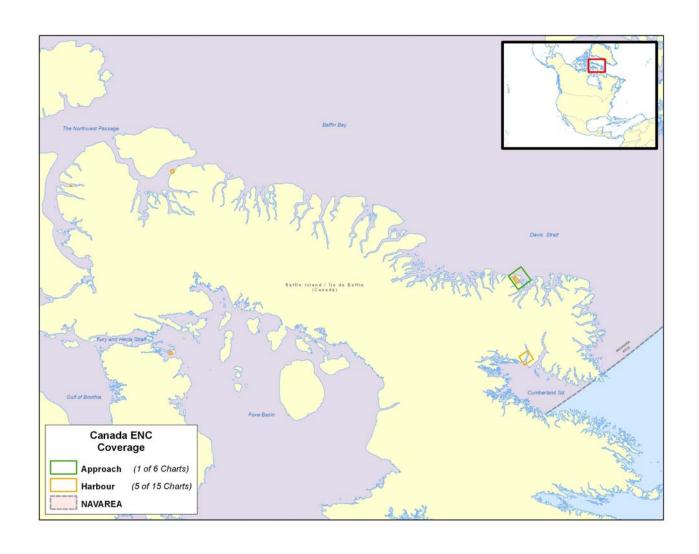
CHAPTER 1: Canada Electronic Navigational Chart Coverage – Large Scale (South-West)



CHAPTER 1: Canada Electronic Navigational Chart Coverage – Large Scale (West)



CHAPTER 1: Canada Electronic Navigational Chart Coverage – Large Scale (East)



Norwegian Sea **Greenland Paper Chart** Coverage (4 Charts) General (14 Charts) (15 Charts) Coastal NAVAREA

Chapter 2: Denmark Paper Chart Coverage – Small Scale

Disko Bay Greenland Greenland Paper Chart Coverage Davis Strait (4 of 6 Charts) (1 of 8 Charts) Harbour Berthing (1 of 1 Charts) NAVAREA 60.0.0.M

Chapter 2: Denmark Paper Chart Coverage – Large Scale (South)

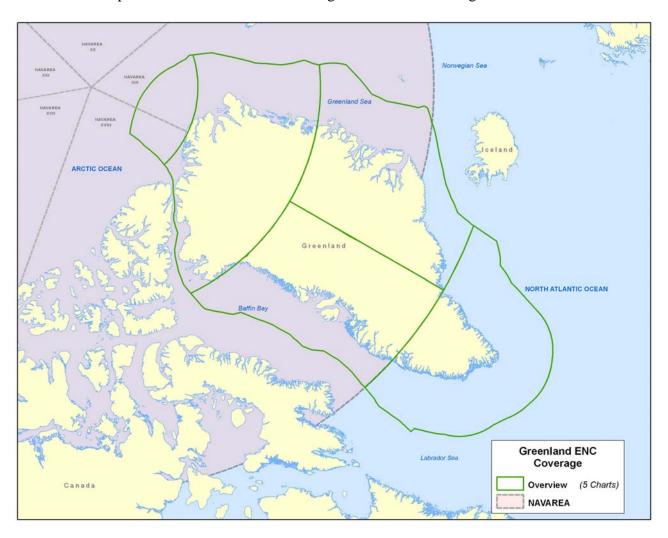
ARCTIC OCEAN Greenland Sea Greenland Greenland Paper Chart Coverage Approach (2 of 6 Charts) Harbour (1 of 8 Charts) NAVAREA

Chapter 2: Denmark Paper Chart Coverage – Large Scale (North)

Greenland (NAVAREA XVIII) **Uummannaq Fjord** Baffin Bay Disko Bay Greenland Paper Chart Coverage (7 of 8 Charts) 60:00°W

Chapter 2: Denmark Paper Chart Coverage – Large Scale (Central)

Chapter 2: Denmark Electronic Navigational Chart Coverage – Small Scale



Greenland (NAVAREA XVIII) **Uummannaq Fjord** Disko Bay **Greenland ENC** Coverage 72°30'0"N-Harbour (4 of 4 Charts) 60.00.M

Chapter 2: Denmark Electronic Navigational Chart Coverage – Large Scale (Central)

Greenland Davis Strait Greenland ENC Coverage Approach (1 of 1 Charts) NAVAREA 55°0'0'W

Chapter 2: Denmark Electronic Navigational Chart Coverage – Large Scale (South)

ARCTIC OCEAN NAVAREA Russian Federation ATLANTIC OCEAN Norway Paper Chart Coverage (5 Charts) Overview Netherlands Poland (8 Charts) General Coastal (21 Charts) NAVAREA

Chapter 3: Norway Paper Chart Coverage – Small Scale

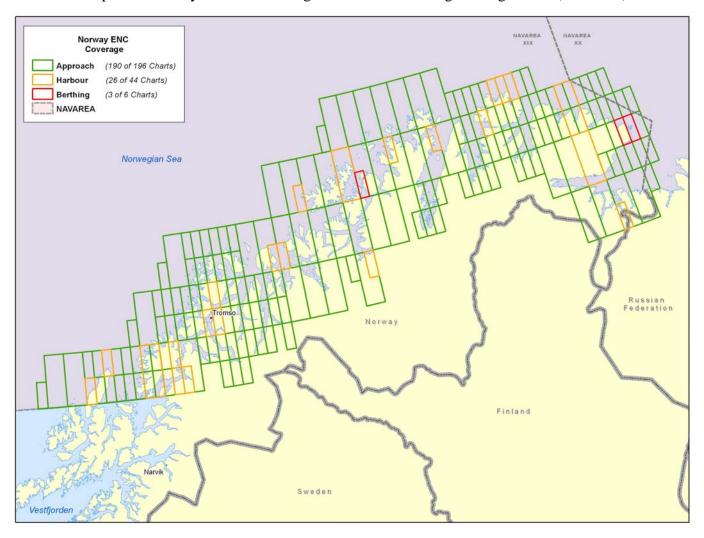
**Norway Paper Chart** Coverage Approach (40 Charts) (3 Charts) Harbour NAVAREA Norwegian Sea Norway Russian Federation Finland Sweden

Chapter 3: Norway Paper Chart Coverage – Large Scale

Ш NORTH ATLANTIC OCEAN Norway ENC Coverage (1 Chart) Overview Poland (30 Charts) General Coastal (43 Charts) NAVAREA

Chapter 3: Norway Electronic Navigational Chart Coverage – Small Scale

Chapter 3: Norway Electronic Navigational Chart Coverage – Large Scale (Mainland)



ARCTIC OCEAN 80'0'0"N-Greenland Sea NAVAREA 75'0'0"N-Norway ENC Norwegian Sea Coverage Approach (6 of 196 Charts) (18 44 Charts) Berthing (3 of 6 Charts) NAVAREA 10'0'0"E 20.00.E

Chapter 3: Norway Electronic Navigational Chart Coverage – Large Scale (Svalbard)

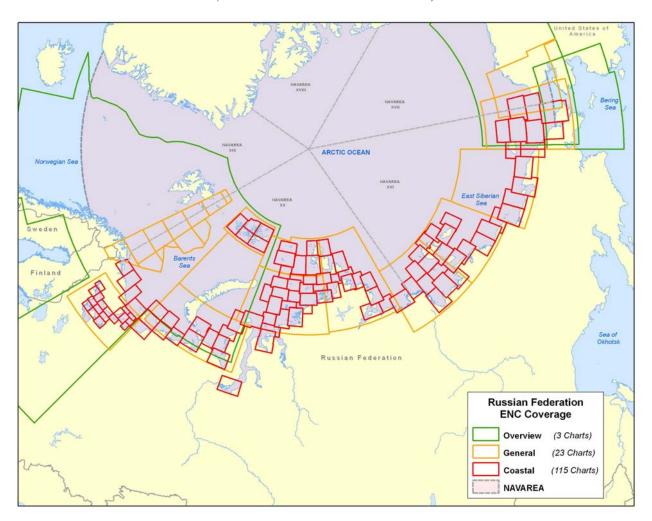
Chapter 4: Russian Federation Paper Chart Coverage – Small Scale

(not yet available)

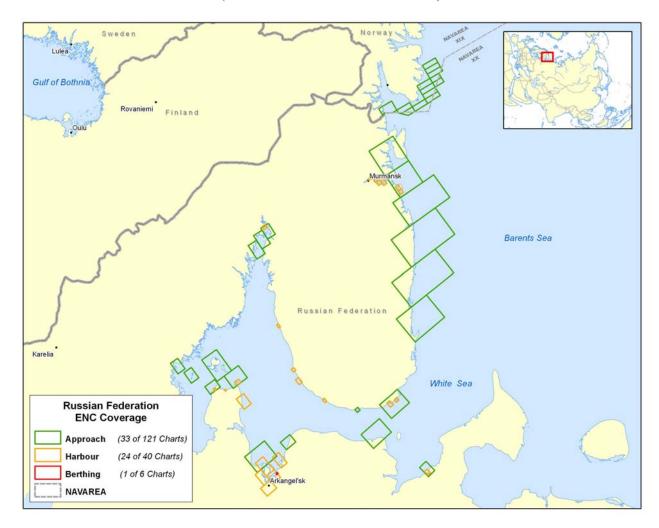
Chapter 4: Russian Federation Paper Chart Coverage – Large Scale

(not yet available)

Chapter 4: Russian Federation Electronic Navigational Chart Coverage – Small Scale (data obtained via the WENDWG)



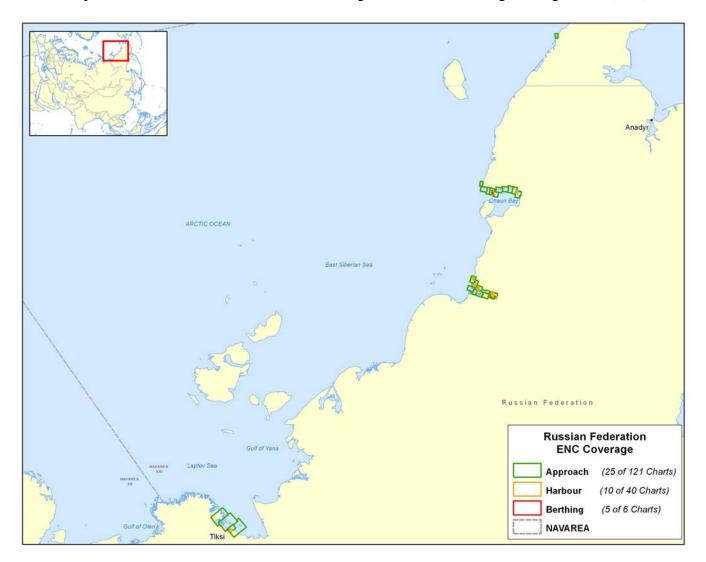
Chapter 4: Russian Federation Electronic Navigational Chart Coverage – Large Scale (West) (data obtained via the WENDWG)



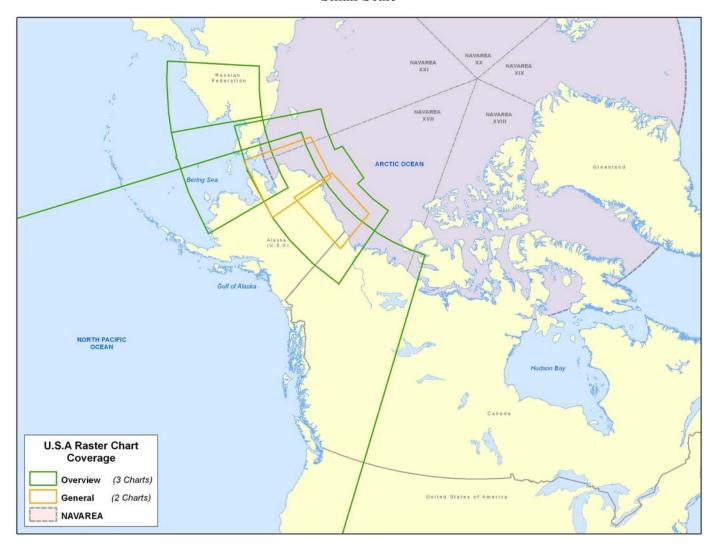
Chapter 4: Russian Federation Electronic Navigational Chart Coverage – Large Scale (Central) (data obtained via the WENDWG)



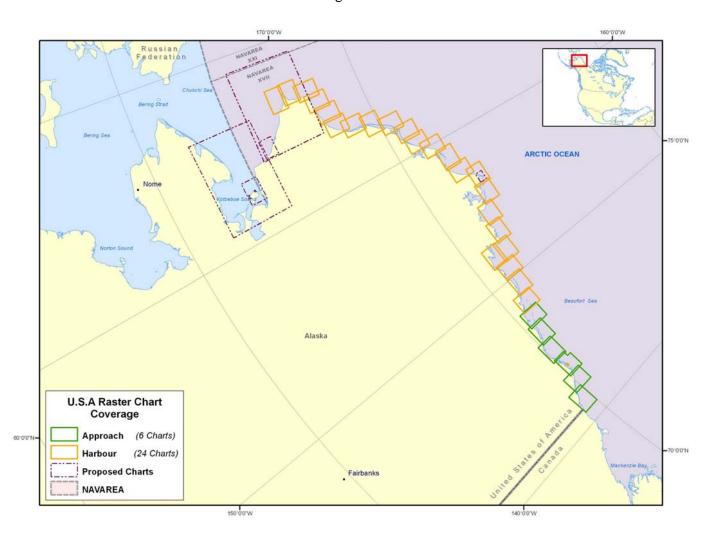
Chapter 4: Russian Federation Electronic Navigational Chart Coverage – Large Scale (East)



Chapter 5: United States Paper Chart and Raster Navigational Chart Coverage Small Scale



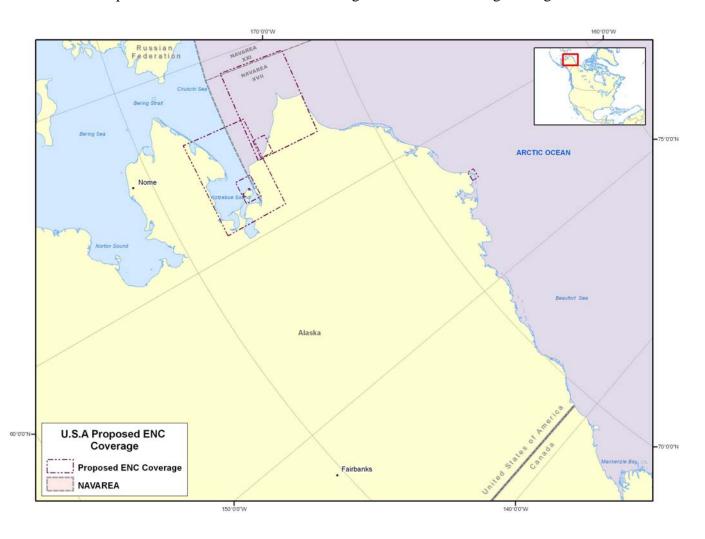
Chapter 5: United States Paper Chart and Raster Navigational Chart Coverage Large Scale



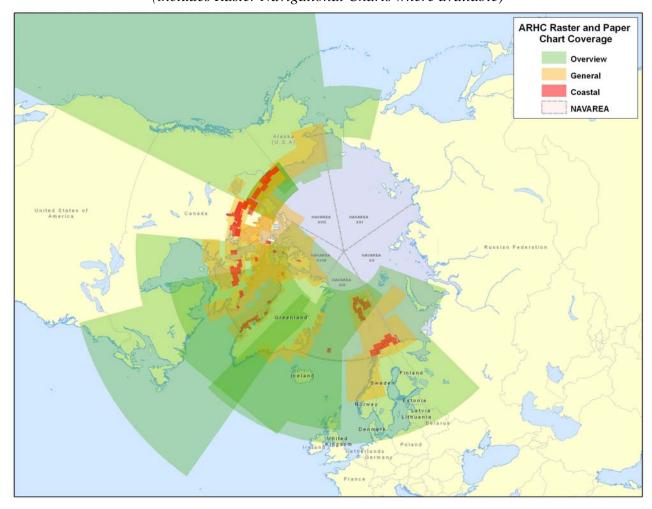
Russian Federation ARCTIC OCEAN NORTH PACIFIC U.S.A ENC Coverage (3 Charts) (2 Charts) General NAVAREA

Chapter 5: United States Electronic Navigational Chart Coverage - Small Scale

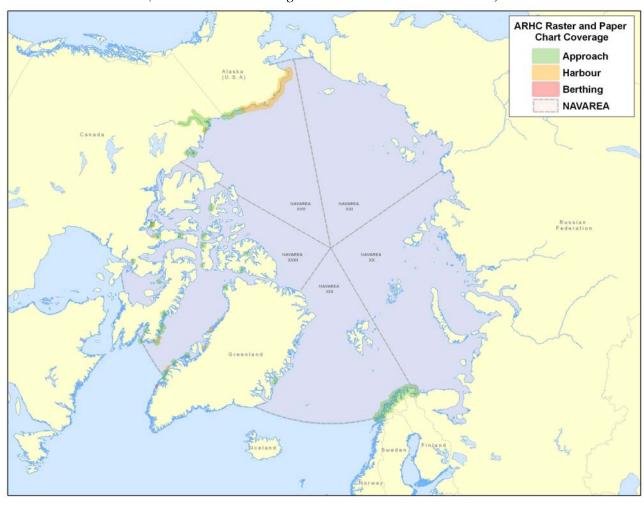
Chapter 5: United States Electronic Navigational Chart Coverage - Large Scale



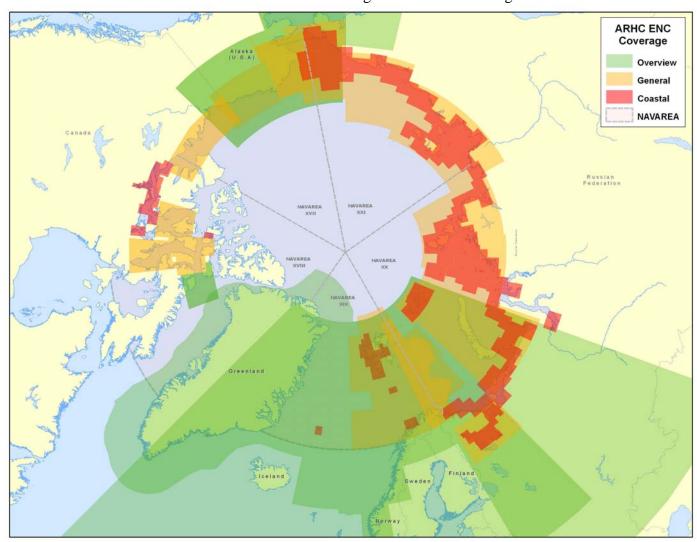
Chapter 6: Arctic Regional Hydrographic Commission Overview Small Scale Paper Chart Coverage (includes Raster Navigational Charts where available)



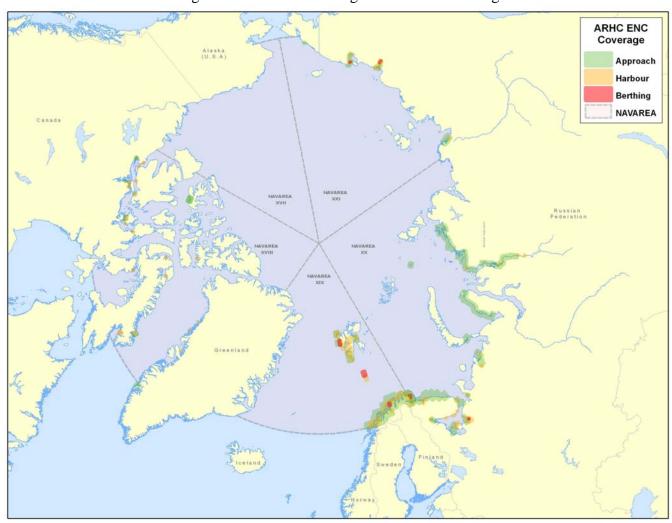
Chapter 6: Arctic Regional Hydrographic Commission Overview Large Scale Paper Chart Coverage (includes Raster Navigational Charts where available)



Chapter 6: Arctic Regional Hydrographic Commission Overview Small Scale Electronic Navigational Chart Coverage



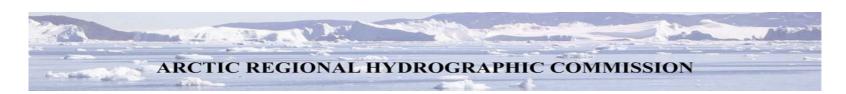
Chapter 6: Arctic Regional Hydrographic Commission Overview Large Scale Electronic Navigational Chart Coverage



Chapter 7: Scale Ranges As Applied By Member States

RANGES/USAGE BAND	CANADA	DENMARK	NORWAY
Berthing/ Band 6	1:2,000 and larger	tbd	1:2,000 and larger
Harbour/Band 5	1:2,001 - 1:20,000	tbd	1:2,001 - 1:20,000
Approach/Band 4	1:20,001 - 1:50,000	tbd	1:20,001 - 1:50,000
Coastal/Band 3	1:50,001 - 1:150,000	tbd	1:50,001 - 1:150,000
General/Band 2	1:150,001 - 1:500,000	tbd	1:150,001 - 1:500,000
Overview/Band 1	1:500,001 and smaller	tbd	1: 500,000 and smaller

RANGES/USAGE BAND	RUSSIAN FEDERATION	UNITED STATES	IHO (Usage Bands recommended)
Berthing/ Band 6	tbd	1:5,000 and larger	1:4,000 and larger
Harbour/Band 5	tbd	1:5,001 - 1:50,000	1:4,001 – 1:21,999
Approach/Band 4	tbd	1:50,001 - 1:150,000	1:22,000 – 1:89,999
Coastal/Band 3	tbd	1:150,001 - 1:600,000	1:90,000 – 1:349,999
General/Band 2	tbd	1:600,001 - 1:1,500,000	1:350,000 – 1:1,499,999
Overview/Band 1	tbd	1:1,500,000 and smaller	1: 1,500,000 and smaller



#### Source References

- Providers of Chart Limit Data (to date)
  - o Canada, Denmark, Norway, United States, WENDWG
- Shorelines and Major Water Bodies
  - o NOAA National Geophysical Data Center
    - GSHHS Version 2.2.0 (July 15, 2011) A Global Self-Consistent, Hierarchical, High Resolution Shoreline Database.
- Bathymetry
  - o GEBCO
    - The GEBCO\_08 Grid
- Administrative Boundaries
  - o CIA World DataBank
    - WDBII Version 2.2.0
- Country Names (toponyms)
  - o ArcGIS.com source: ESRI, DeLorme Publishing Company, Inc.
- World Cities (toponyms)
  - o ArcGIS.com source: DeLorme Publishing Company, Inc.
- Marine Toponyms
  - o Natural Earth (naturalearthdata.com)
    - Marine Areas

#### Software

- ArcGIS 10.0
- PCI Geomatica V10.3
- GridViewer (GEBCO)

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