Precision Navigation

Captain Elizabeth Kretovic, NOAA

Office of Coast Survey, NOAA
Foundations – International Standards
**What is Precision Navigation**

**Goal:** Seamlessly integrate high-resolution bathymetry, high accuracy positioning and shoreline data with real-time observations, predictions, and forecast data—such as water levels, currents, salinity, temperature, waves, and weather forecasts—to provide NOAA’s data in formats that can be easily accessed and integrated into portable pilot units, underkeel clearance management system, electronic chart viewers or other decision support tools.
Why do we need Precision Navigation?

50 years of Container Ship Growth

- **1968**: Encounter Bay 1,530 teu
- **1972**: Hamburg Express 2,050 teu
- **1980**: Neptune Garnet 4,100 teu
- **1984**: American New York 4,600 teu
- **1996**: Regina Maersk 6,400 teu
- **1997**: Susan Maersk 8,000+ teu
- **2002**: Charlotte Maersk 8,690 teu
- **2003**: Anna Maersk 8,900+ teu
- **2005**: Gjertrud Maersk 10,000+ teu
- **2006**: Emma Maersk 11,000+ teu
- **2012**: Marco Polo (CMA CGM) 16,000+ teu
- **2013**: Maersk-McKinney Møller 18,270 teu
- **2014/2015**: CSCL Globe/MSC Oscar 19,000+ teu
- **2018**: ?? Tunnelling 22,000 teu

Container-carrying capacity has increased by approximately 1,200% since 1968.
Precision Navigation Program Projects

Port of Long Beach
**Pilot project complete**

Lower Mississippi

New York/New Jersey
Precision Navigation in Action: Port of Long Beach, CA
When will I benefit from Precision Navigation Program?

This program is just getting started:

Completed pilot project (Long Beach) → the approach to different port challenges
  • Socio-economic study to help prioritize ports
The dissemination site is in development
  • Held a workshop with PPU, ECS, UKCM companies
  • We will be reaching out to end users for our next workshop to ensure our success
Future of Navigation and NOAA Navigation Services

Precision Navigation
1. We are working to provide you with integrated data marine navigation data
   • We will be asking for your input throughout this process
2. We are working to meet the future needs of the mariner and maritime industry

Raster Sunset
1. In order to improve our marine navigation data, we will be sun-setting our raster service and products including paper charts
   • This process will happen over 5 years
   • We are asking for your feedback on the manner and timing of this
End of Traditional NOAA Paper Nautical Chart Production

- A five year process to end all traditional paper nautical chart production
  - Includes all other raster chart products
  - Products and services are expected to be cancelled by 2025.
- NOAA is seeking feedback from all chart users and industry partners
  - This will shape feedback on the manner and timing of the sunsetting process
- NOAA is undertaking a three pronged sunsetting process
  - Improving data consistency and providing larger scale coverage
  - Providing access to paper chart products based on ENC data
  - Shutting down all traditional paper and associated raster production
- Paper charts from ENC data can be created with the NOAA Custom Chart web app
- Historical editions of nautical charts are still available for downloading
NOAA is undertaking a three pronged sunsetting process:
- Improving data consistency and providing larger scale coverage
- Providing access to paper chart products based on ENC data
- Shutting down all traditional paper and associated raster production
NOAA is undertaking a three pronged sunsetting process

- Improving data consistency and providing larger scale coverage
- Providing access to paper chart products based on ENC data
- Shutting down all traditional paper and associated raster production
• Paper charts from ENC data can be created with the NOAA Custom Chart web app

• Historical editions of nautical charts are still available for downloading
Questions?

For more contact: Elizabeth.Kretovic@noaa.gov