

An Update on NOAA's Path to S-101
South-West Pacific Hydrographic Commission S-100
Workshop #3
November 2023

Karl Wagner
National Oceanic and Atmospheric Administration (USA)

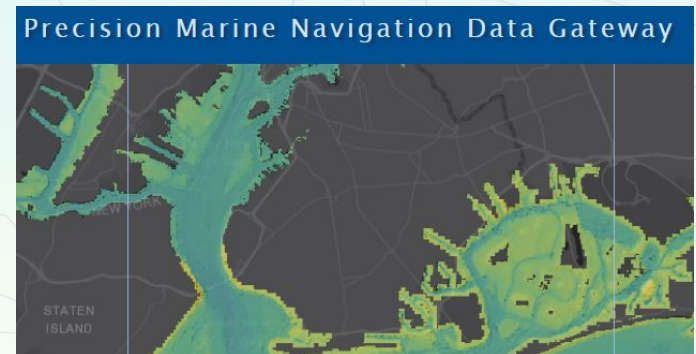
S-100: Timelines for initial products in the US

- S-101, Electronic Navigational Chart: Late 2025
- S-102, Bathymetric Surface: 2024 (prototype)
- S-104, Water Level Information: 2024 (prototype)
- S-111, Surface Currents: 2020 (prototype)
- S-128, Catalogue of Nautical Products: 2025

- S-124, Navigational Warnings—National Geospatial-Intelligence Agency

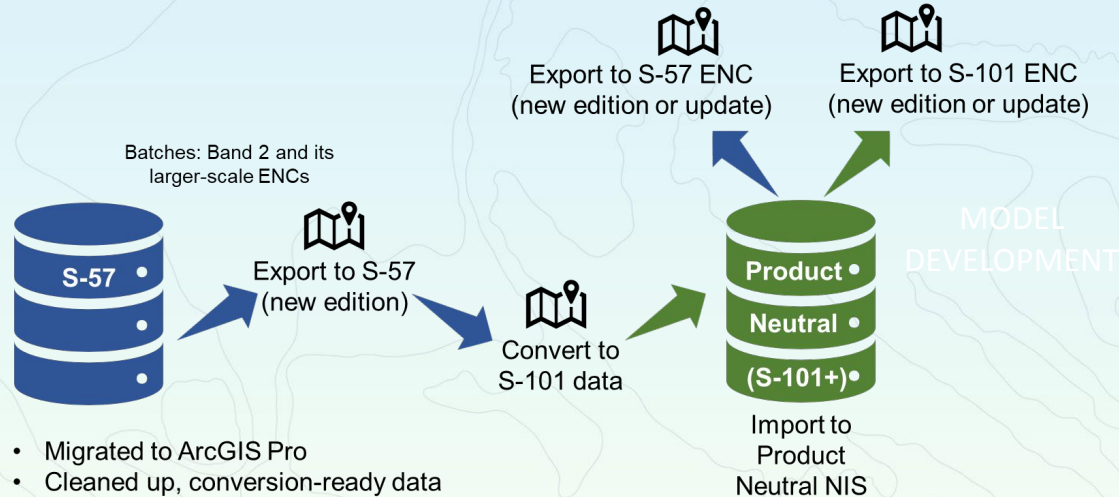
Prototype products can be found online: <https://marinenavigation.noaa.gov/>

Prioritizing S-101 coverage in major US ports to start
Added value where multiple products exist



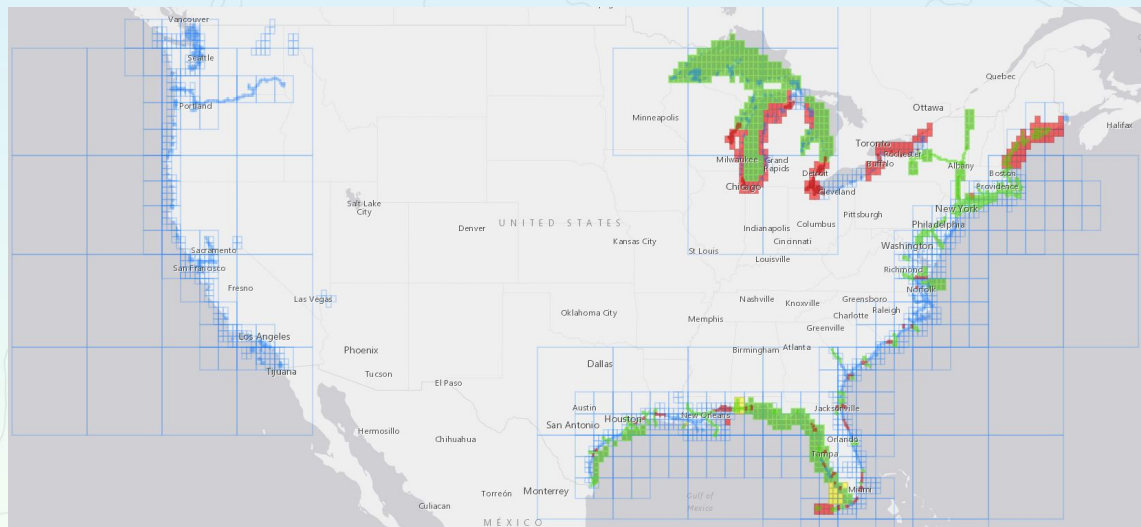
S-101 dual-fuel production model

- ArcGIS production system
- Migrate to a new, single database in S-101 (or S-101-like) format - prototype in 2024?
- Export to S-57 and S-101 format products and their respective updates
 - How to map from S-101 back to S-57?



Preparations ahead of 2026

- Finish gridding our chart scheme by end of 2026
- Realign chart scales to IHO radar ranges
- Clean up S-57 encodings and internal encoding guide - goal is “conversion-ready” data
- Testing and evaluation of S-101 converters (for loading the new database) and production tools (day-to-day maintenance)



Challenges

- Competing projects leading into 2026
 - Moving from ArcMap to ArcPro in 2024
 - Gridding chart scheme by the end of 2026
- Evolving S-101 standard and guidance
 - Need to update our internal encoding policies with a moving standard (should stabilize late in 2024)
 - Standardize/clean-up existing S-57 encoding for clean conversion
- Conversion software tools
 - Tools can produce different results.
 - How do we establish that S-101 data is “equivalent” to S-57 data? Manually intensive
- Dual-fuel production
 - What does the schema look like?
 - How can we be confident that dual-fuel S-57 ENC is “equivalent” to original S-57 ENC?

Thank you!

Karl Wagner
karl.wagner@noaa.gov
National Oceanic and Atmospheric Administration (USA)