

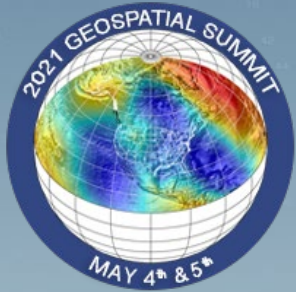
National Geodetic Survey's FY21 Accomplishments and Priorities for FY22

Update on Modernization of National Spatial Reference System and Coastal Mapping Activities

Juliana Blackwell, Director
National Geodetic Survey

Hydrographic Services Review Panel Virtual Meeting
September 1, 2021

Geospatial Summit and Industry Workshop



2021 Geospatial Summit

- Fifth Summit since 2010!
- 100% virtual event
- More than 1,000 people each day

Who attended?

- Participants from all 50 states, Puerto Rico, DC, and territories
- 60% surveyors or engineers
- 53% public sector (federal, state, and local governments)
- 123 from NOAA / 39 from USGS

2021 Industry Workshop

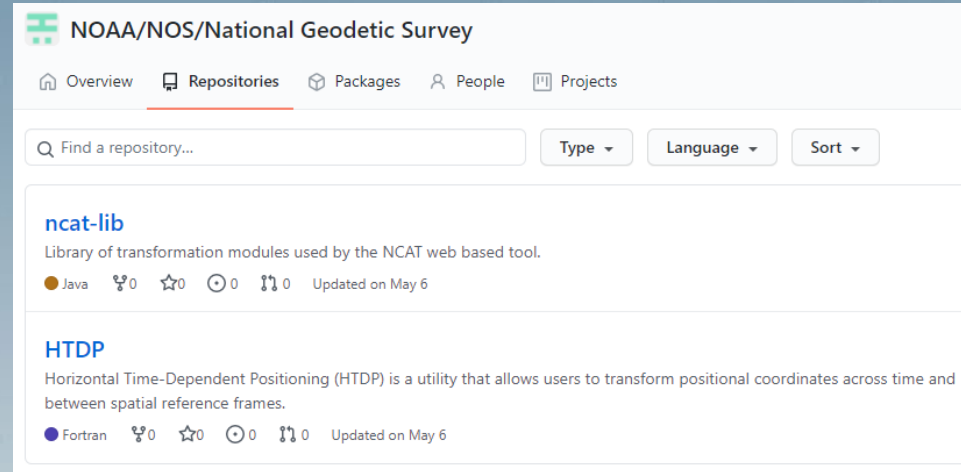
- Follow-on from 2018 Workshop
- For survey equipment manufacturing and geospatial software development industry
- Participants included 34 reps from 12 companies
- Coordinate transformations are a primary interest
- Strong interest in working with NGS on NSRS Modernization and making the necessary upgrades to their software

For more information visit: <https://geodesy.noaa.gov/datums/newdatums>



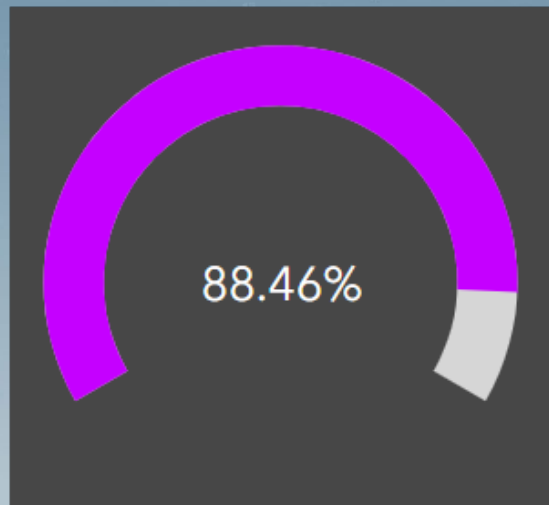
Synching with Commercial Software

- NGS is using GitHub (Cloud Software as a Service) for collaborating with partners on software development.
- NCAT and HTDP are available now with more code repositories to follow.
- Test data sets will allow companies and users to check third party tools against NGS results.
- Developers of commercial software are able to verify they have the latest release of NGS' authoritative models and tools.

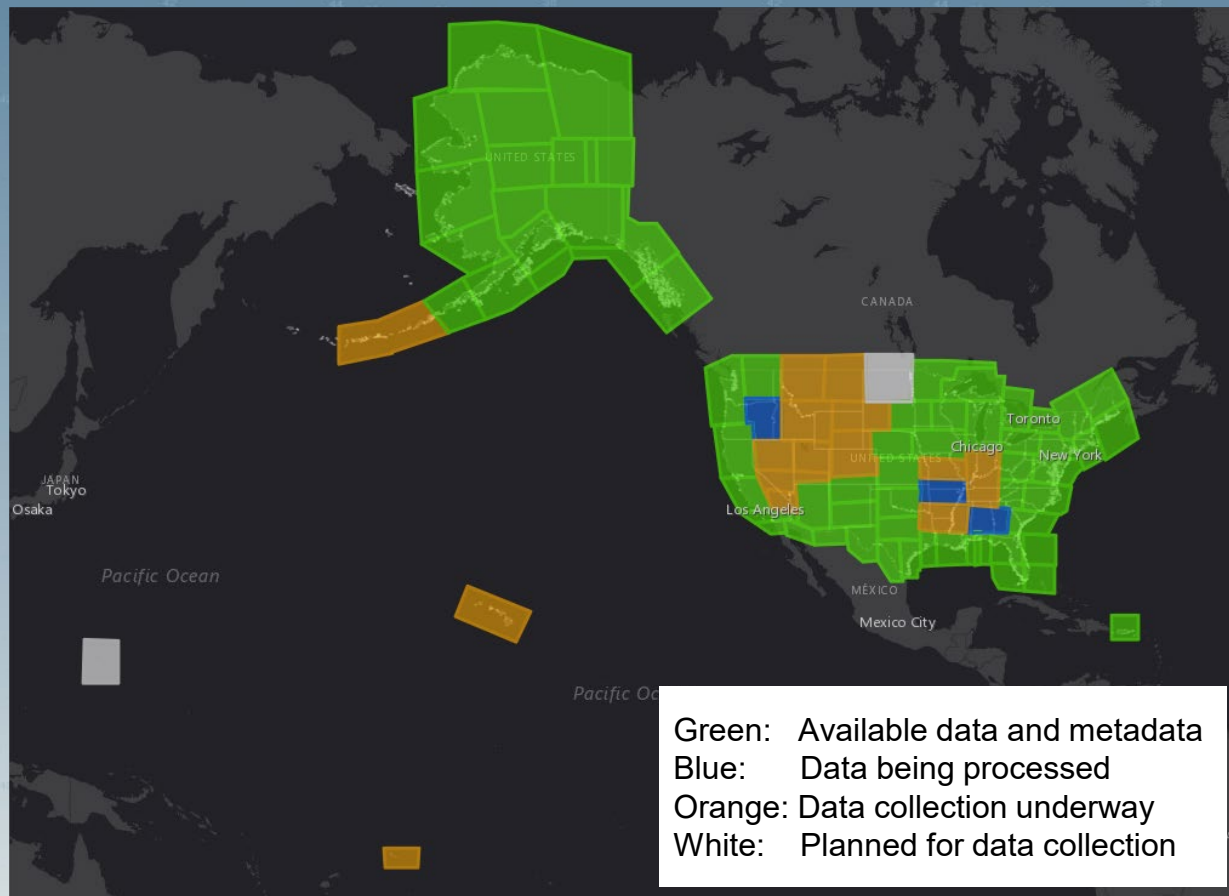


<https://github.com/noaa-ngs/>

GRAV-D Update

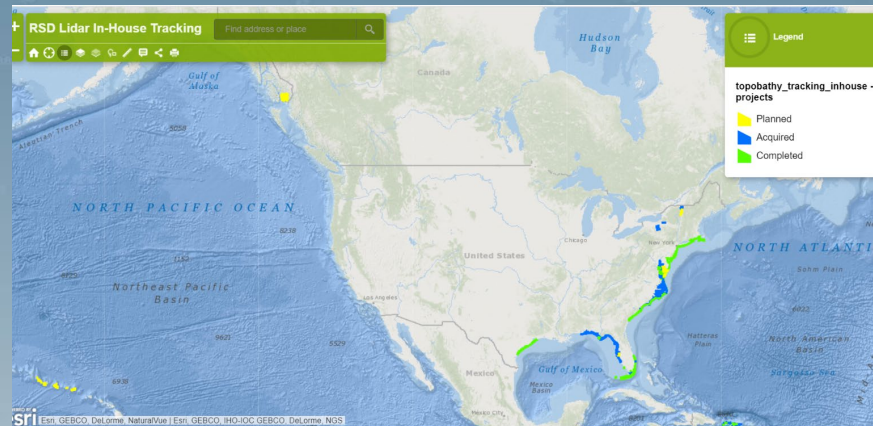


% of Target Area
Collected as of
August 16, 2021



Coastal Mapping Updates

- FY21 internal and contract projects focused on increasing the safety and efficiency of NOAA hydrographic operations by collecting data from nearshore to laser extinction limit
- Ongoing projects in HI, AK, MD, and VA
- Collection and processing on internal and contracted efforts continue to be impacted by travel and flight restrictions



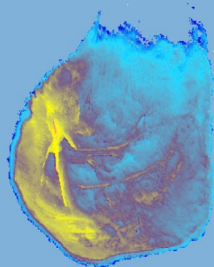
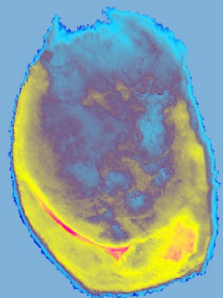
Upgraded camera system accepted

- 2 x 150mp RGB
- 2 x 100mp NIR
- 123° Field of View

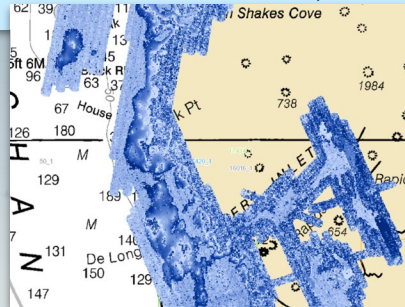
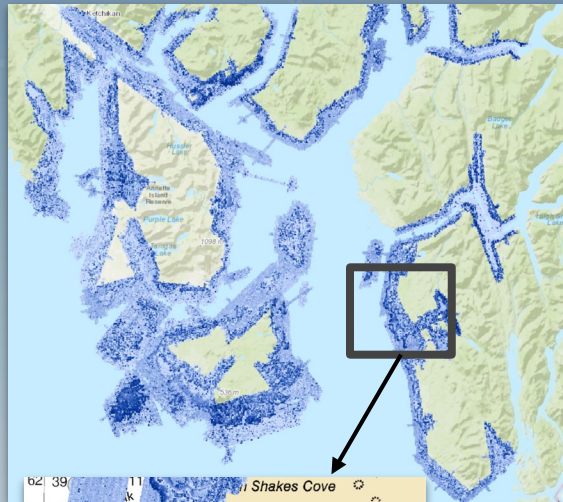
Coastal Mapping Updates

Quick look DEMs of current ongoing operations

**Northwest Hawaiian
Islands**
(French Frigate Shoals)

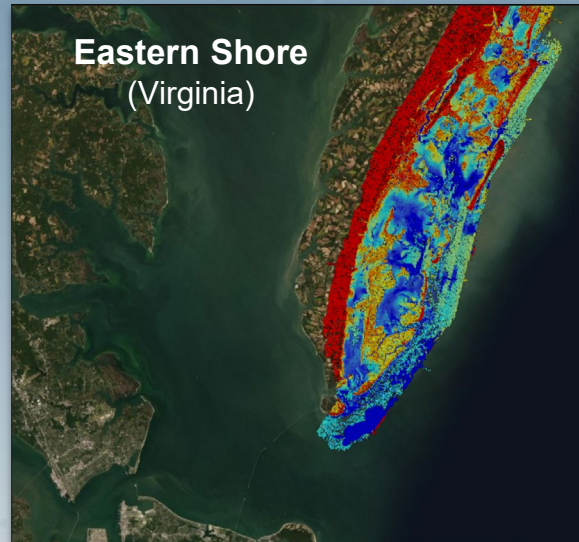


PACIFIC
OCEAN

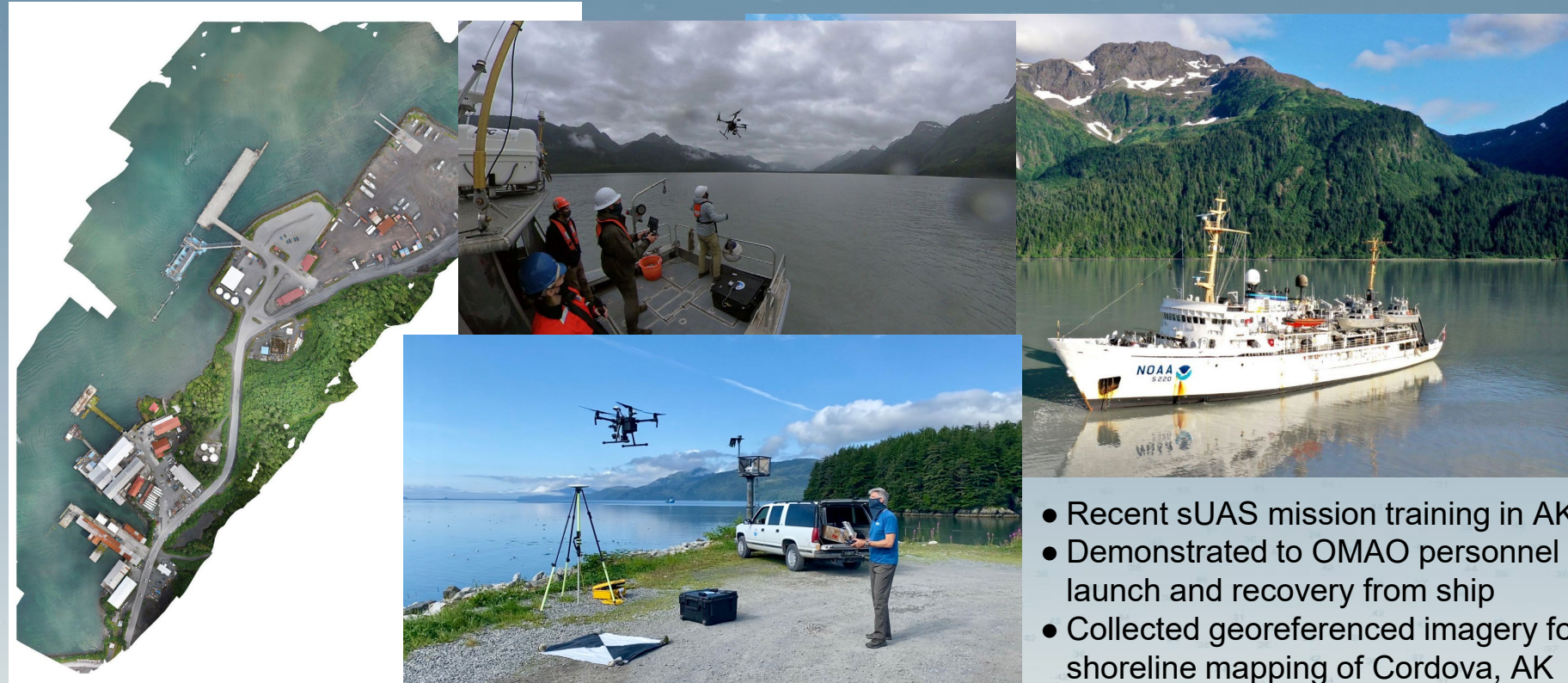


Southeast AK
(Revillagigedo)

Eastern Shore
(Virginia)

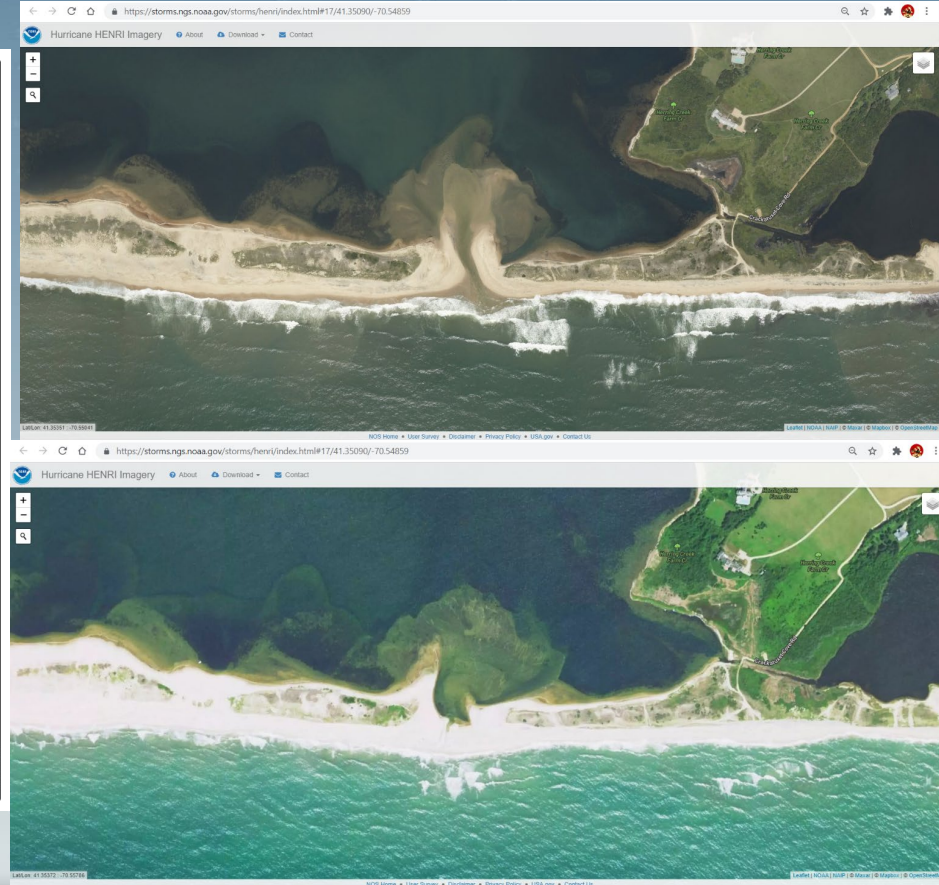
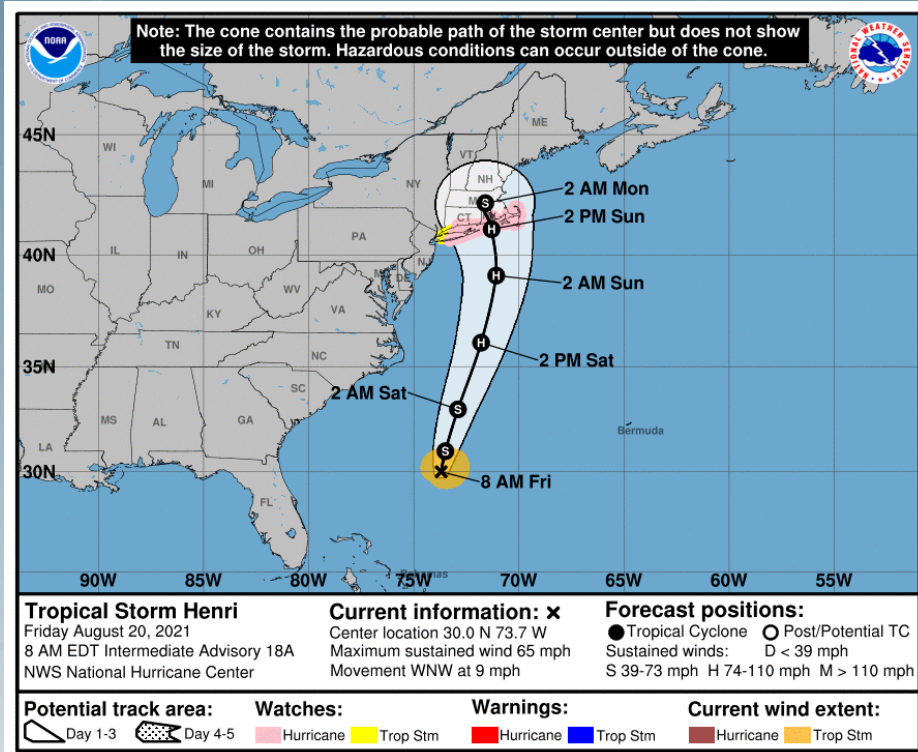


sUAS R20 for Coastal Mapping



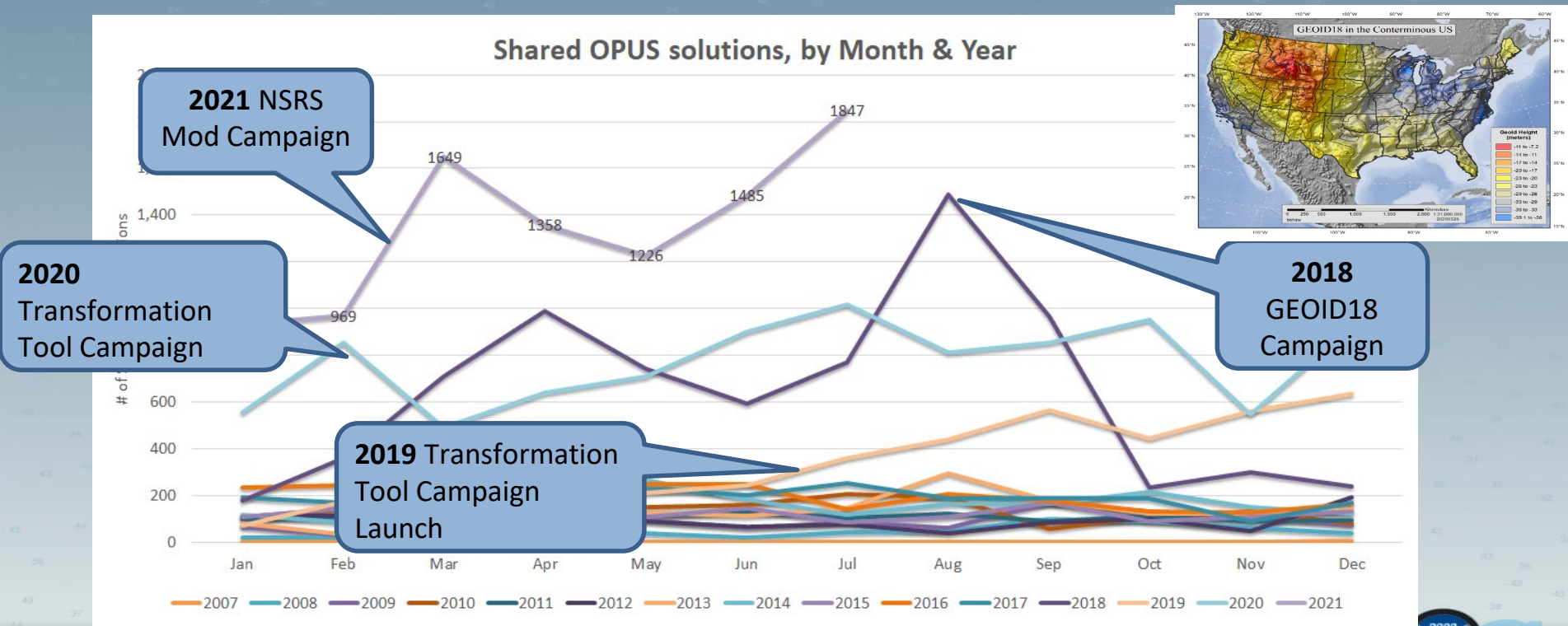
- Recent sUAS mission training in AK
- Demonstrated to OMAO personnel launch and recovery from ship
- Collected georeferenced imagery for shoreline mapping of Cordova, AK

Emergency Response Imagery - Hurricane Henri



GPSonBM is Driving a Surge in Shared OPUS Solutions

Modernized NSRS will be realized through shared GNSS data





New Coastal Resilience Interagency Working Group

*Co-led by Council on Environmental Quality and NOAA
and reports to the National Climate Task Force*

Goals:

- Aligning major federal involvement in coastal resilience activities
- Developing effective and equitable grant making strategies
- Facilitating use of federal data sharing and geospatial resources

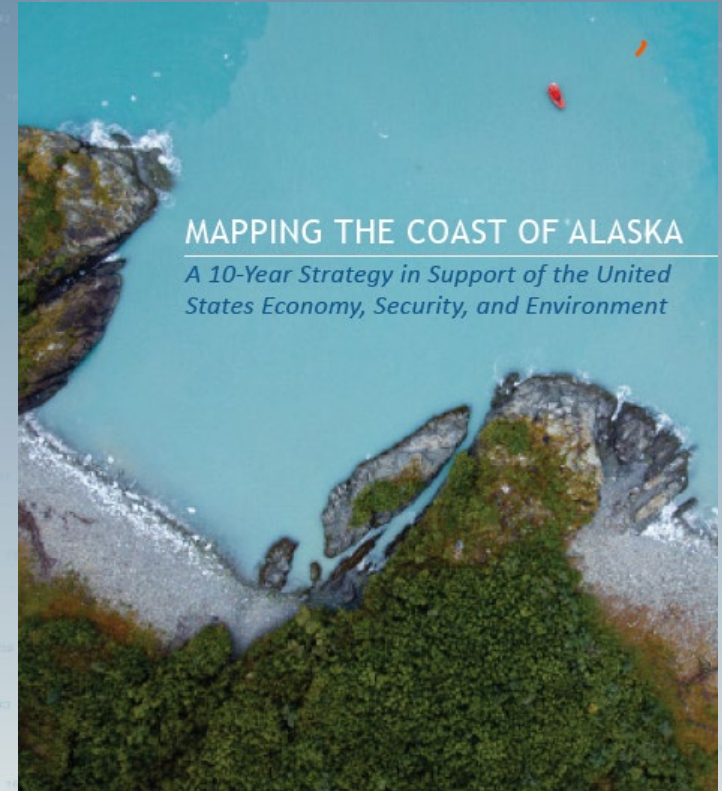
FY22 Priorities

HYDROGRAPHIC SERVICES REVIEW PANEL



Alaska Coastal Mapping Strategy Update

The implementation plan is currently waiting for the new administration team to review and approve it before it gets sent out for public comment.



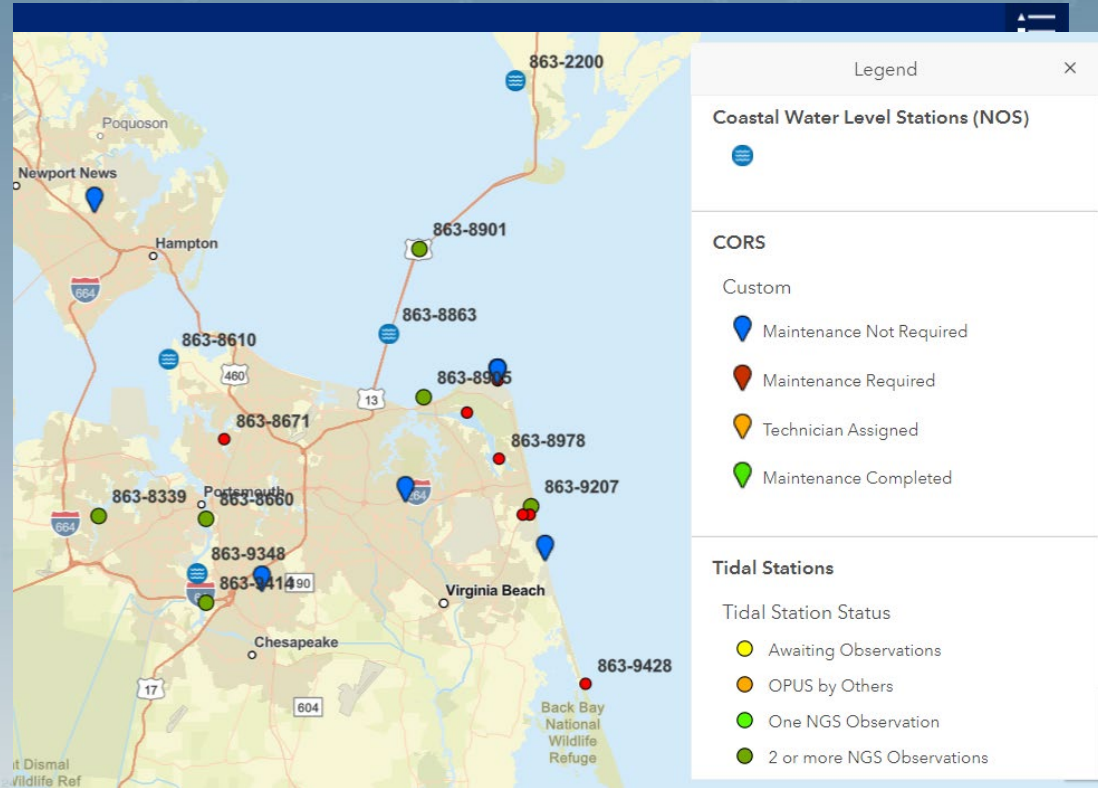
NGS Collaboration with CO-OPS

- Co-location of NGS Field Operations Branch with CO-OPS Field Operations Division will increase operational awareness and collaboration.
- Development of a mapping tool showing operational status of projects and infrastructure.



NGS Collaboration with CO-OPS

- Mapping of tidal benchmarks has been improved by tying into CO-OPS database
- Individual marks now able to be shown, edited, and navigated to
- Mapping tool improves field collection efforts and progress tracking by VDATUM team



FY22 Continuation of NSRS Modernization Efforts

- CORS Comprehensive Plan
- GRAV-D in the Pacific Islands
- Foundation CORS
- OPUS Projects 5.0 and Multi-GNSS processing beta release
- New Least-Squares Adjustment Code Library (LASER)