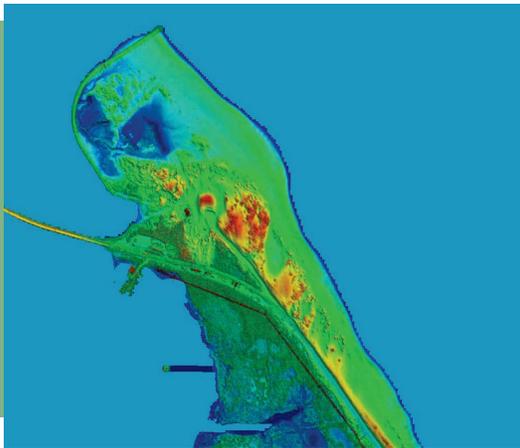
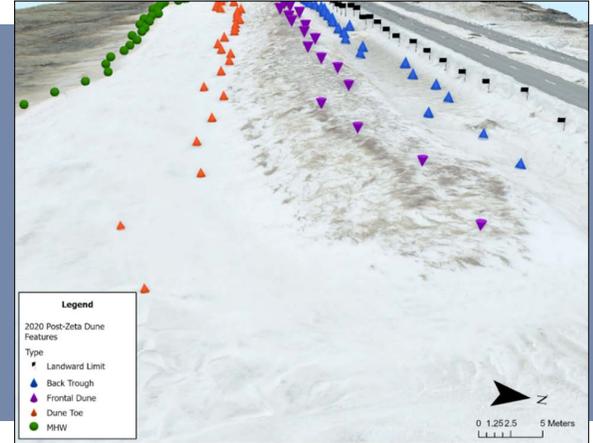


# Performance Metrics for Nature-Based Solutions: Leveraging 25 Years of USACE and Partner Remote Sensing Data

## PROJECT GOAL

The project aims to combine and organize multiple data types for a holistic analysis of case studies and leverage existing GIS-based tools (including cloud-based analysis methods) to conduct geospatial analyses and extract NBS performance metrics, track and quantify the performance of NBS over time, and publish case study results to a public, online data hub.

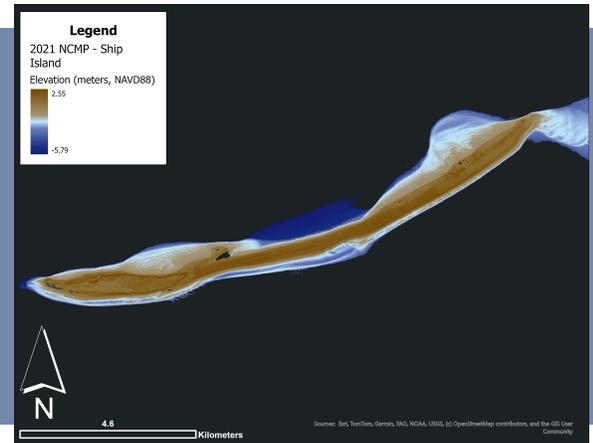


## PROJECT VALUE

The primary value of this project revolves around the alignment of coastal remote sensing data and tools with NBS performance metrics. As these data and tools are more commonly leveraged, coastal practitioners will see optimization of project performance, reduction of costs associated with adaptive management, and successful documentation and quantification of the implementation of NBS.

## PROJECT OBJECTIVES

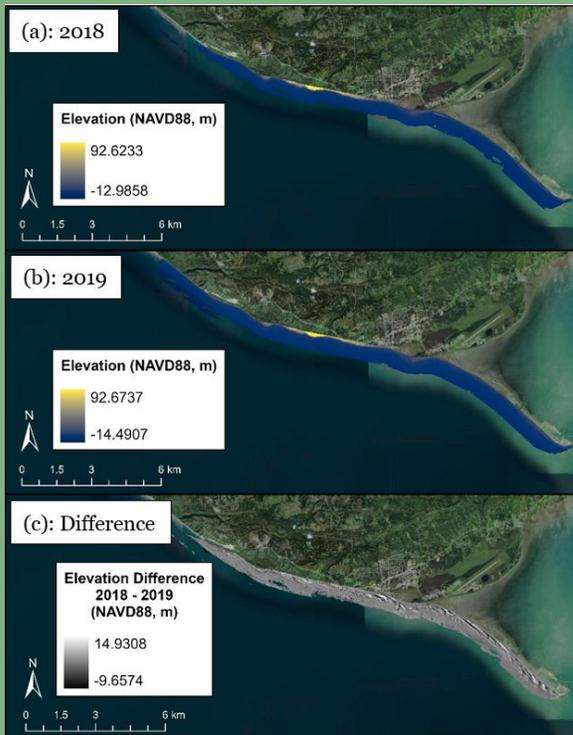
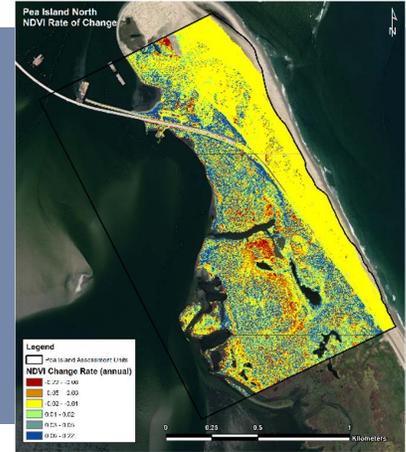
- Leverage over 25 years of coastal USACE and federal partner data across multiple data-rich coastal NBS case studies.
- Utilize/adapt existing GIS toolboxes to quantitatively analyze coastal NBS case study data and document the long-term performance metrics.
- Migrate a case study workflow into a cloud computing environment as a proof of concept for future NBS monitoring.



# Performance Metrics for Nature-Based Solutions: Leveraging 25 Years of USACE and Partner Remote Sensing Data

## STATEMENT OF NEED

This project directly addresses Civil Works SoN 2136 – it envisions documentation of the performance metrics of various nature-based solutions in technical reports and/or other literature, a web map or web-accessible database of nationwide nature-based solution performance metrics, and case studies documenting the long-term survivability and failure mechanisms of nature-based solutions.



## PROJECT DELIVERABLES

Products and deliverables are planned throughout the project and consist of:

1. Geospatial data hosted in an online hub for case studies.
2. New or modified geospatial tools published on the ERDC Knowledge Core website and/or the ERDC GitLab instance.
3. An ERDC technical report and technical note.
4. A recorded webinar demonstrating the use of data products.
5. Annual conference presentations, pending travel allowances.

Transition will also consist of dissemination of products to USACE District stakeholders and other federal and state agencies that have an interest and are involved with NBS implementation. The PDT will engage stakeholders via conference and workshop attendance (e.g. Coastal Working Group) annually.

