



U.S. ARMY

COASTAL INLETS RESEARCH PROGRAM: PROGRAM MANAGEMENT WORK UNIT

Tanya M. Beck, CIRP Program Manager

Mitchell Brown, CIRP Tech-Transfer

COASTAL INLETS RESEARCH PROGRAM

FY20 IN PROGRESS REVIEW

Mike Ott

HQ Navigation Business
Line Manager

Eddie Wiggins

Technical Director

Katherine Brutsché

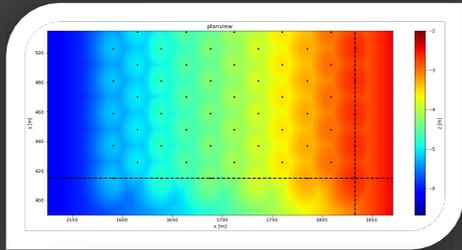
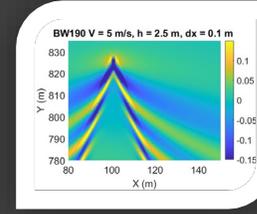
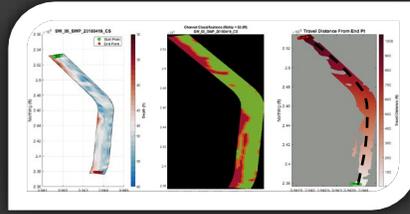
Associate Technical Director



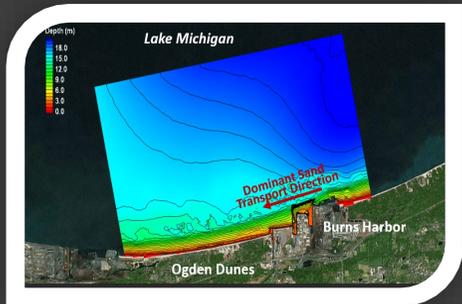
US Army Corps
of Engineers



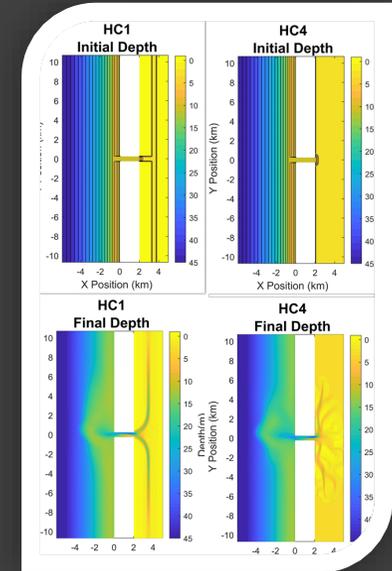

ERDC
ENGINEER RESEARCH & DEVELOPMENT CENTER



Advancing knowledge and technology to better predict future channel shoaling.

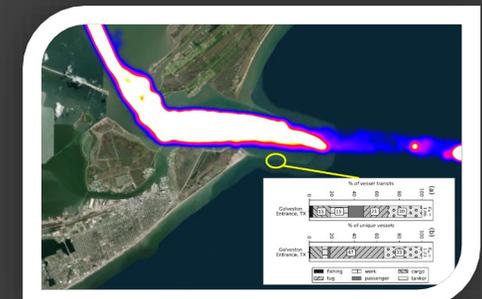


Providing quantitative and practical predictive tools and data analytics to reduce the cost of dredging for Federal navigation projects and to maintain jetties.



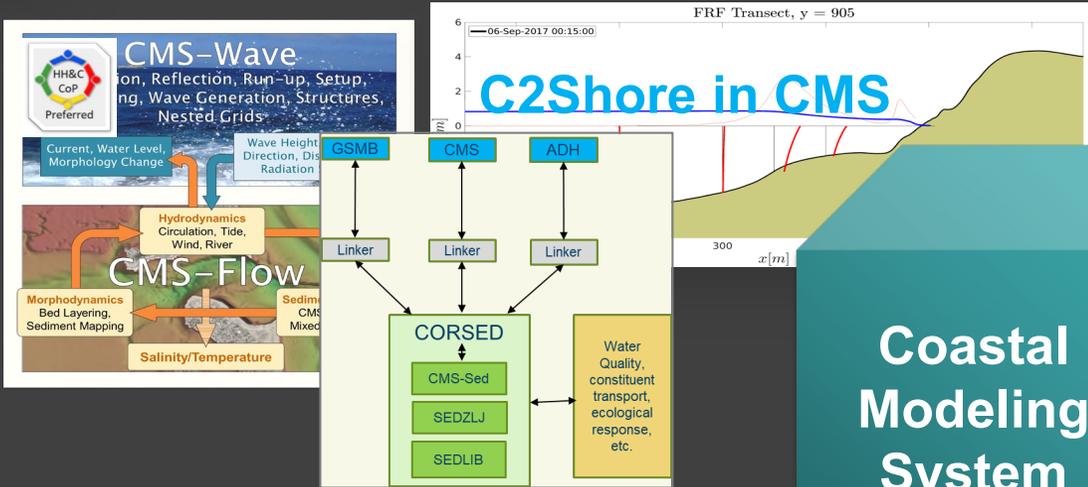
Quantifying potential unintended consequences and identifying necessary mitigation.

Understanding future conditions for coastal navigation and providing engineering guidance.





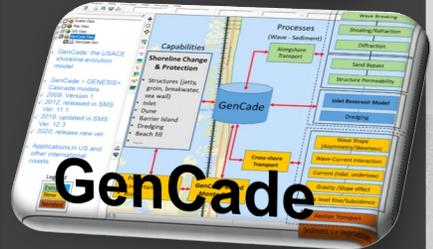
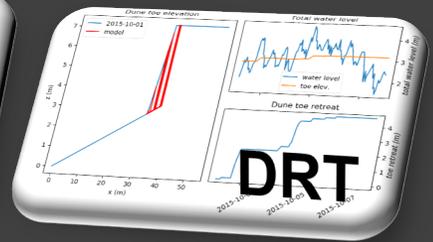
Work Units and Projects



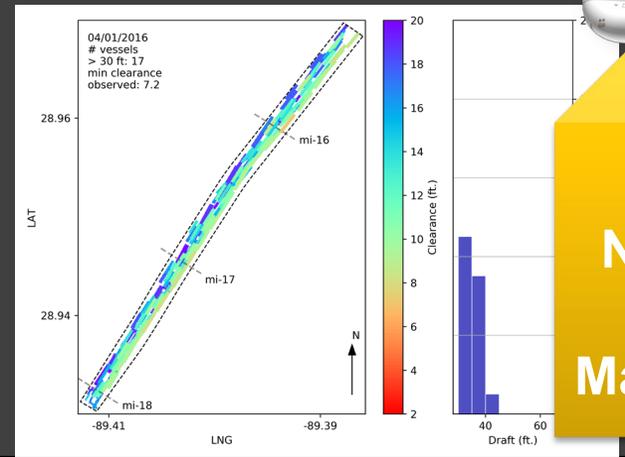
Coastal Modeling System



Inlet Engineering Tools

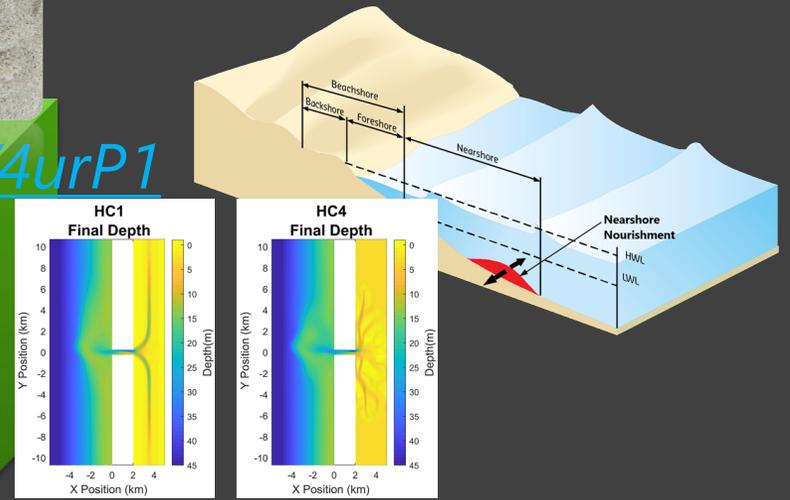


Coastal Navigation Portfolio Management



<https://arcg.is/4urP1>

Inlet Geomorphic Evolution

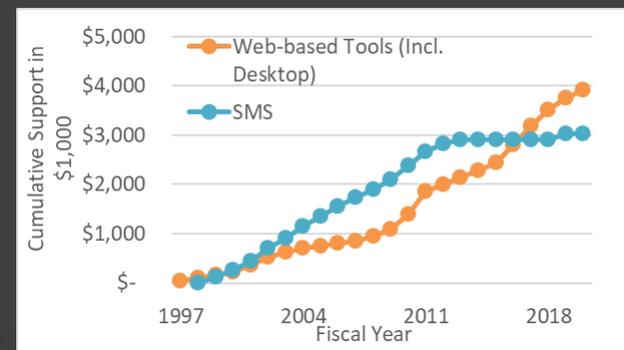
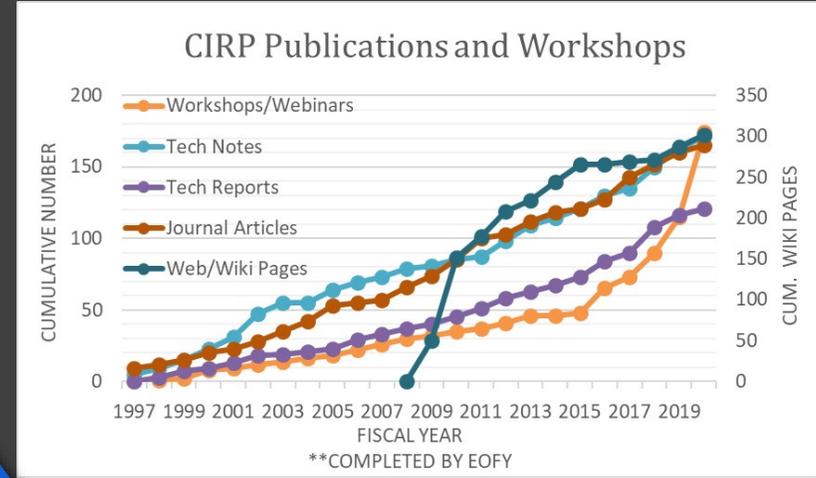
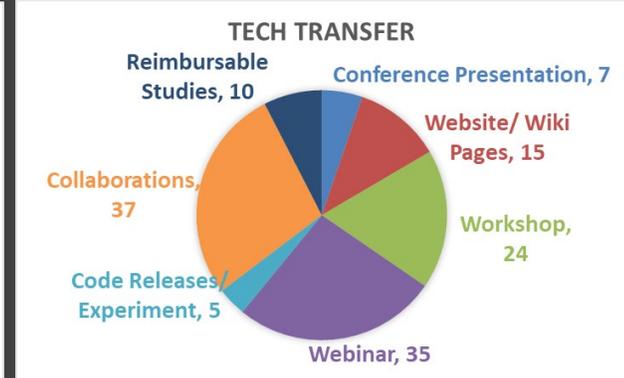
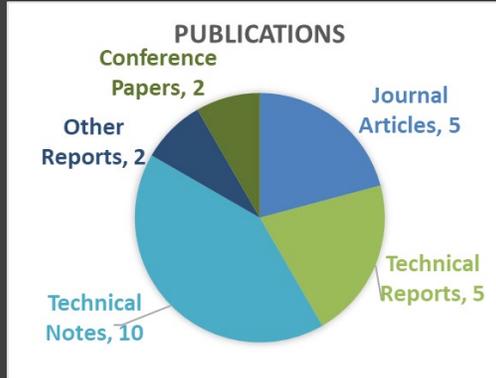
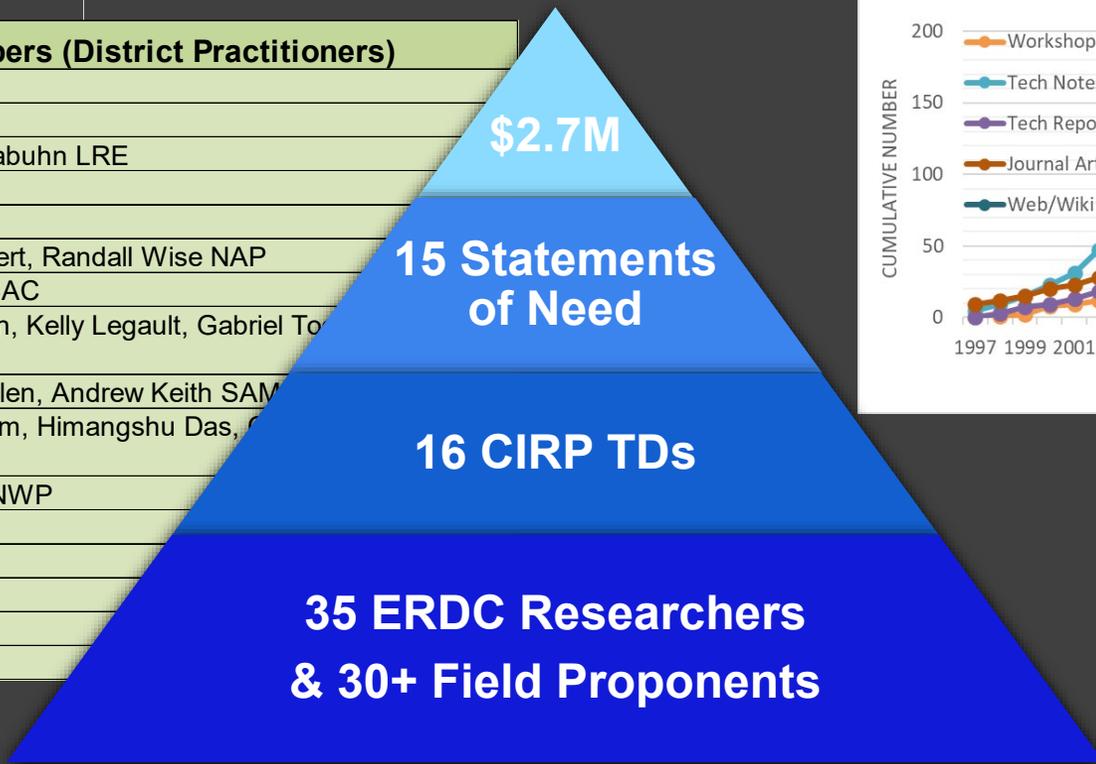


FY20 Program Metrics

SoNS
2019-N/F/E-1411 Sust. Dredging to Support Wetlands
2019-N-1386: Strat. Placement to Sustain Beach-Dune
2019-N/F/E-1370: Test/Eval coastal numerical models
2019-N/F-1356: Long-term Modeling of Barrier-Inlets
2019-N-1332 – Waterway transit times from AIS Data
2019-N/F/E-1322: Nearshore Placement Wetland Nour.
2019-N-1297: Vessel Wake Analysis Tool

2017-N-09: SL wave di	FY20 PDT Members (District Practitioners)
2017-N-52: CPT and A	Weston Cross LRB
2017-N-67: Guidance f	John Wethington LRC
2017-N-69: Cross-shor	Rachel Malburg, Katherine Labuhn LRE
2017-N-70: Shoreline R	Lisa Winter NAE
2017-N-71: Modeling E	Jeff Swallow NAO
2017-N-72: Dune morph	Monica Chasten, Jeffrey Gebert, Randall Wise NAP Bethney Ward, Sara Brown SAC
2016-N-04: Wave/Curr	Kevin Hodgens, Drew Condon, Kelly Legault, Gabriel To Engle SAJ
	Elizabeth Godsey, Richard Allen, Andrew Keith SAM Partick Kerr, M. Shahidul Islam, Himangshu Das, C Frederick Fenner SWG
	Rod Moritz, Auston Hudson NWP Matthew Wesley SPL
	Jessica Podoski POH Jane Smith, ERDC ST
	John Winkelman HH&C Dylan Davis SAD

**Mid-point
Review
Webinars**



Communicating Technology Transfer Activity



CIRP Technical Discussions

List of Discussions by Fiscal Year

Fiscal Year	Discussion Title	Link
FY 2020	15 Sep	All links contained in this tab...
	29 Sep	DTIC Publication Data Center...
	01 Sep	...
	18 Aug	...
	21 Jul	...
	07 Jul	...
FY 2019	24 Mar	...
	10 Mar	...
	26 Feb	...
	11 Feb	...
	28 Jan	...
	17 Dec	...

Technical and Special Reports

Corps Shoaling Analysis

Updated 5/19/20

The CSAT calculates channel shoaling surveys and uses the shoaling rates to generate shoaling rate grids. The volume tables the speed over time as reflected in the decision making that will maximize the time as reflected in the CSAT 1.0.x was run using a Matlab export upload through eHydro for the channel and navigation using Python instead. CSAT is being used for AISAP Asset Management (AM) program.

For Installation instructions below. (**Note - this product requires a separate installation)

- Nearshore Planning the Nearshore
- Performance Validation of Wave Averaging Estimates
- Evaluating Coastal Sediment Transport Placement Sites
- Review of Coastal Barrier-Inlet Processes
- Design water and South Bronx

CUMULATIVE TRAFFIC MAP
2019-09 to 2020-09

Traffic per country
Hover over a country

Home Products Publications Tech Transfer

Wiki CMS

Automated Analysis Package

More info

- All presentations and demo files are available on this page
- Get SMS
 - Version 13.0.8 (USACE) - [App-portal](#)
 - Version 13.0.x (non-USACE) - [Aguaveo](#)
- Get latest released CMS version 5.1.x - [CIRP Wiki](#)

Note: This training assumes basic knowledge of the SMS and CMS. If needed, click here to review the previous Basic webinar.

[CMS Advanced Webinar - Files and Videos](#) (click each to open)

Day 1 - Working with the Dredge Module for CMS-Flow

- [Video - Presentation](#)
- [Video - Demo](#)
- [Presentation - Dredge Module](#)
- [Data \[~78 MB\]](#)

Day 2 - Working with 4 structure types for CMS-Flow

- [Video - Presentation](#)
- [Video - Weir Demo](#)
- [Video - Rubble Mound Demo](#)

Website: <https://cirp.usace.army.mil/>

StoryMaps for Quick Tech Transfer

<https://cirp.usace.army.mil/products/portal.php>

Coastal Inlets Research Program
US Army Corps of Engineers

Home Products Publications Tech Transfer Wiki CIRP Find us on Facebook

Coastal Inlets of the US CSAT Data CIRP Publications Map

Corp Shoaling Analysis Tool USACE Civil Districts
Coastal and Inlets Research Program (CIRP) Coastal and Hydraulics Laboratory (CHL)

Legend

USACE Civil Districts

Shoaling Rate Data

Availability

Boundary

Shoaling Rate

ft/yr

Image

High : 10

Low : -10

Find address or place

CANADA

UNITED STATES

MÉXICO

Pacific Ocean

Atlantic Ocean

VENEZUELA

COLOMBIA

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Publications

Conference Papers	8
Journal Articles or Chapters	39
Conference Presentations	19
Technical Reports	59
Technical Notes	13

Publications by USACE Civil Districts

Chicago	4
Detroit	2
Galveston	30
Honolulu	12
Jacksonville	23
Los Angeles	3
Mobile	6
New England	6
New Orleans	3
New York	15
None	3
Norfolk	5
Portland	7
San Francisco	6
Savannah	1
Seattle	5
Wilmington	3

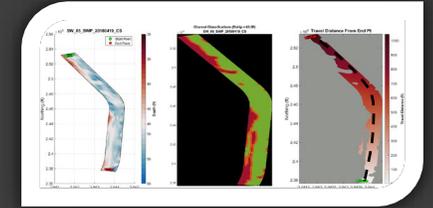
Publications Total

US Army Corps of Engineers • Engineer Research and Development Center • Coastal and Hydraulics Laboratory

Summary

FY20

- Advancing channel sedimentation and vessel analytics
- Swash closure in CMS/C2SHORE and FRF-sandbar validation
- Testing new aeolian transport code (Aeolis) and Dune Response Tool
- Nearshore nourishment & machine learning in Citizen Science
- Long-term Modeling of Inlet Systems to Optimize Dredging & Placement
- Transition Technologies to NavPortal framework and Open Source GIT Repositories (numerical models & tools)
- Tech Transfer –webinars/workshops at all levels (Engineer, Divisions, HQ)



FY21

- Base Budget of \$2.45M; Reviewing research pre-proposals
- Increase technology transfer opportunities and PDT engagement
- Cross-program Coordination on Mapped R&D and Strategic Direction
- Mentoring and growing CIRP teams

